7&8

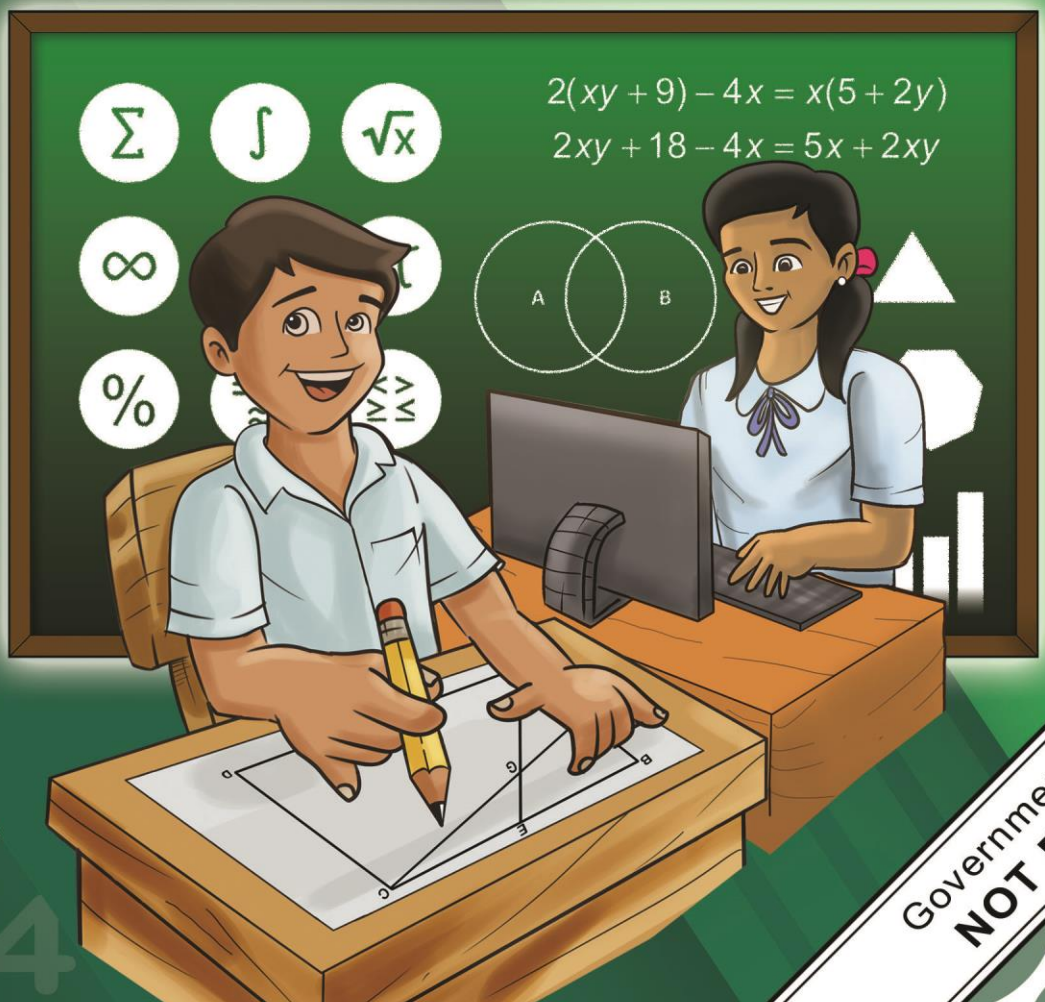
NATIONAL LEARNING CAMP

DepED DEPARTMENT OF EDUCATION

Mathematics

Intervention Learning Camp

Lesson Plans and Teacher Notes



Intervention Learning Camp

Intervention Mathematics

Lesson Plans and Teacher Notes

Grades 7 and 8

Contents

Dear Reader

Every care has been taken to ensure the accuracy of the information provided in this Booklet. Nevertheless, if you identify a mistake, error or issue, or wish to provide a comment we would appreciate you informing the **Office of the Director of the Bureau of Learning Delivery** via telephone numbers (02) 8637-4346 and 8637-4347 or by email at bld.od@deped.gov.ph

Thank you for your support

Lesson Overview Intervention Camp

Overview

Each lesson in the Intervention Camp Literacy and Intervention Camp Numeracy contains a set of components that are repeated each day of the Camps.

The Intervention Camps lessons are directed by the teacher and designed to be highly interactive among:

(i) students with their teacher; and
(ii) students with their peers.

The Camp lessons are grounded in the 'Science of Learning' framework, focusing on cognitive research and deliberate practice of fundamental skills to enhance learning outcomes. Lessons are structured to reinforce and most often help automate with understanding foundational knowledge and skills.

Design Basis

Under the framework of 'Science of Learning', research-evidence is used to ground teaching and learning decisions around cognition research and features of a learning brain such as working memory demands, cognitive load and valuing errors. This framework highlights a *learning-focused approach* where teachers go beyond what might be considered current practice in the Philippines and incorporate brain-based ideas and approaches to make teaching more effective in enhancing learning for all.

Lesson Features

Timing

The estimated time to deliver each component is provided to assist the teacher pace the lessons.

Time management involves moving through components at a pace that is appropriate for the students while still ensuring that the components are completed in a timely, efficient, and constructive manner. However, in the end, the pace of the lesson will be determined by the students' needs and strengths.

Nevertheless, there needs to be practical limits on the duration of the parts of the lesson to prevent major disruption of lessons. When times are allocated appropriately, and students become familiar with the approach and teacher expectations, concept development and student skill levels are improved.

Research on student learning quality and 'time' are related through student 'time-on-task'. Time-on-task refers to the time students are actively involved (engaged) in some aspect of the learning process in class. The suggested times for each part are intended to maximize the time available for student involvement. This will encourage the student to work efficiently, timewise, through the lesson.

Establishing on-task time is more problematic when the teacher talks and students passively listen, such as in didactic teaching. With such an approach it is difficult to determine whether students are listening or paying attention.

Care needs to be exercised in determining what engagement means. Engagement is clearer when students are *doing the learning* through answering questions, writing, discussing, and reading.

Critical aspects of the National Learning Camp for the teacher include questions related to learning areas, based around a key aspect of Basic English or Mathematics. Students are provided with opportunities to deliberately practice these aspects to help improve their conceptual understanding by attempting to become automatic, i.e., reach automaticity.

Teacher reflection on the lessons presented can offer important insights to stimulate teachers to enhance their own practice and the learning of their students.

The Intervention Camp in Mathematics

The Intervention Camp provides opportunities for students who cannot demonstrate either basic arithmetic calculations across addition and subtraction in Mathematics or essential word recognition or reading in appropriate texts. The Camp offers students the opportunity to create new or further skills, understandings and knowledge as part of a process that requires students being able to respond automatically to basic mathematics questions and read sentences fluently, which are relevant to their learning situation.

All lessons in each of Intervention Mathematics and Intervention English contain a selected list of components. Approximate timings for the components are indicated to guide the teacher in pacing the lessons. The suggested times for each component are intended to maximize student involvement.

The overall aim is to improve students' information retrieval times to levels that free working-memory capacity from an excessive focus on mundane or routine tasks. In this way, students can engage meaningfully in more demanding classroom activities.

In the Intervention Camp, automaticity is fostered, and time and accuracy are incorporated as key dimensions of learning. An emphasis is placed on ensuring maximum student on-task time. Regular small group lessons encourage students to monitor their own learning and to set realistic academic goals.

This approach enables students to work efficiently, timewise, through the lesson without jeopardizing the importance of such activities as students: respond to verbal questions and explanations; use appropriate terminology; discuss aspects with their peers; explain or justify their thinking; and work productively on their own.

In the case of Intervention Mathematics, the focus is on recall and understanding of basic number facts, performance of fundamental arithmetic operations, and appropriate mathematical language acquisition development. Central to the process is the development of **automaticity** with conceptual understanding.

The approach requires students to replace slow and error-prone approaches (especially count-by-one strategies or finger approaches) to use more efficient and sophisticated methods with automatic recall encouraged through focused deliberate practice.

More specifically the Intervention Camp involves a series of lessons encouraging the development of number facts – not just in students obtaining the answer, but in getting to the answer as quickly as possible (*Fast*). The entails practice in a variety of forms involving memory and retrieval activities as well as timed speed sheets, independent practice and mathematical games.

It is important that students in the Intervention Camp are aware of where their learning is at and where it is progressing. Teachers need to be nurturing and supportive of this development and continually look for evidence of success and growth. Teachers also need to encourage students to persist, continue with deliberate practice of individual aspects and learn from any mistakes. These are all important features of their learning journey. Finally, teachers should be sensitive to student's self-perceptions as they meet, maybe after many failures in the past, fundamental skills, knowledge and understandings.

The mantra, however, remains the same. "I know you may have met these basic skills many times in the past and you think you know them, but do you know them and can use them fast (quickly and with understanding)."

Intervention Mathematics Lesson Plan

The sequence of lessons consists of 45-minute lessons, three times per day and three days per week for three weeks, with a total of 27 lessons.

Lessons cannot be individualized, as they will progressively work through the number facts for the entire class. Addition and subtraction are completed for the facts 0 to 12. The final lesson is on problem solving using the number facts learnt. The progression is as follows:

Day 1	Day 2	Day 3	Day 4	Day 5	Day 6
+ 0 & + 1	+ 3	+ 9	+ 7	All from Addition	– 4
+ 2	+ 10	+ 5	+ 8	– 0 & – 1	– 3
+ 4	+ 11	+ 6	+ 12	– 2	– 10

Day 7	Day 8	Day 9
– 11	– 6	– 12
– 9	– 7	All from Subtraction
– 5	– 8	Problem Solving

The lessons have a consistent structure, as follows, with examples from the first day's lesson given. A game is played in the first two lessons per day that is replaced by a final reflection in the third lesson within a day.

Component	Description	Example	Resources
1 (5 mins) (10 mins if 1st time on operation)	**Review:** Students review 1-2 number fact sets for the lesson. Students review facts from each number fact set as an exercise, to determine level of knowledge. Then an interactive discussion is conducted with the class to enhance understanding. Students fill in the blanks in the number facts in their workbooks.	Lesson 1: +0 and +1; Lesson 2: +2; Lesson 3: +4. Teacher uses questioning to draw out understanding and facilitate discussion of the specified number fact for the lesson.	Student and Teacher Workbooks
2 (5 mins)	**Lesson Intention:** Teacher explains the goal of the lesson, activities and success criteria. Students may already know the facts**,** but do they know them quickly? **Language:** Review words and phrases relevant to the lesson.	Goal: to be quick and accurate answering questions within the number facts set(s), e.g., Lesson 1: to be able to add 1 or 0 to a number; Lesson 2: to be able to add 2 to a number; Lesson 3: to be able to add 4 to a number.	Student and Teacher Workbooks
3 (10 mins)	**Speed Challenge:** Students, in groups of 2-3, attempt to answer as many flash cards as they can in 1 minute (with the goal of 30 or more) for the number facts set(s), with up to 2 attempts per student. Students graph the number of cards they had incorrect and correct in their workbooks. Teacher assists students needing additional support.	Lesson 1: flash card set + 0 & + 1 mixed pack; Lesson 2: flash card set +2; Lesson 3: flash card set +4.	Flash card set in Teacher resources, timers and Student and Teacher Workbooks

4 (5 mins)	**Speed Questions:** Students answer as many questions on the number facts set(s) as they can in 2 minutes from ½ a page of questions on the operation and a few on the inverse operation. Questions are marked by students after the 2 minutes.	Lesson 1: + & - for 0 & 1; Lesson 2: + & - 2; Lesson 3: + & - 4 (Note: light on the subtraction).	Student and Teacher Workbooks
5 (10 mins) (5 mins if 1st time on operation)	**Worksheets:** Students complete a puzzle and activity sheet for the number facts sets covered to date for the operation and inverse operation. Teacher assists students needing additional support.	Lesson 1: + & - for 0 & 1 and other number fact sets as needed; Lesson 2: + & - for 0, 1 & 2; Lesson 3: + & - for 0 & 1 & 4.	Student and Teacher Workbooks
6 (5 mins)	**Frenzies (Operation Squares):** To consolidate learning, the frenzies use the number facts sets covered to date for the operation. Students fill in as many facts as they can in 4 minutes, then marked.	Lessons 1-3: for + 0, 1, 2 and 4 (the number fact sets covered in day 1).	Student and Teacher Workbooks
7 (5 mins) (if 1st or 2nd lesson in the day)	**Game:** A Bingo game related to the number fact set is played together as a class. Students create their unique grid by selecting and placing 9 numbers from the list, and cross off the numbers if they answer a question posed by the teacher, until there is a winner.	Lesson 1: for + 0 & 1; Lesson 2: for + 2.	Student and Teacher Workbooks
7 (5 mins) (if 3rd lesson in the day only)	**Conclusion:** Reflection and Wrap Up. Teachers encourage students to reflect and report on the day's lessons and meeting goals regarding the number fact sets.	Lesson 3: Teacher questions class for the key take-away idea(s) for the day's lessons (e.g., if +0, the number remains the same, as adding nothing). Question(s) posed to enable student reflection on their understanding and confidence on the lesson number fact set(s).	Student and Teacher Workbooks

If the lesson is a consolidation lesson for the entire operation, then the above plans apply, however the lesson covers the entire operation rather than 1-2 number facts, e.g., all addition of 0 to 12.

The final problem-solving lesson has the structure as shown below in the table, with the final lesson including a reflection on the sequence of Intervention Mathematics lessons.

Component	Description	Example	Resources
1 (5 mins)	**Review:** The teacher facilitates a review on the number facts already covered. Students answer short questions that will relate to the numbers used in the questions within the lesson.	Lesson 27: Students answer the short questions in their workbooks. Teacher uses questioning to facilitate discussion and extend understanding, e.g., "You know 10 x 3, what's 10 x 30" etc.	Student and Teacher Workbooks
2 (5 mins)	**Lesson Intention:** Application of learning. **Language:** Review words and phrases relevant to the lesson.		Student and Teacher Workbooks
3 (25 mins) consisting of Parts A (5 mins); B (10 mins); and C (10 mins)	**Context:** A real life scenario with a series of related questions to answer.	Lesson 27: a scenario relatable to students with which to apply the number facts learnt.	Student and Teacher Workbooks
	Part A - Context: Introduction and discussion of the contextual scenario (STEM), so students understand the situation before using the number facts or solving.	Lesson 27: a shopping scenario is introduced.	
	Part B - Questions: 3-4 questions on the scenario are provided in the student workbook, which are attempted and then marked by the students.	Lesson 27: Questions in the student workbooks related to the situation, such as 'how much for a certain amount of an item?' or 'how much change would you receive?'	
	Part C - Questions: 3-4 questions on the scenario are provided in the student workbook, which are attempted and then marked by the students.		
4 (10 mins)	**Conclusion:** Reflection and Wrap Up of Lessons. Teachers encourage students to reflect and report on the series of lessons and meeting goals regarding the number fact sets.	Lesson 27: Question(s) posed to enable student reflection on their understanding and confidence on the topics covered in all the lessons.	Student and Teacher Workbooks, Survey

Overview of Problem-Solving Lessons

Lesson Component 1 (Lesson Short Review)

Component 1 offers teachers the chance to:

- settle the class quickly
- review or preview previously encountered information
- address previous content in the form of a few targeted questions that are **relevant to the current lesson**
- note what students already know
- elicit answers from the class to reinforce the important content needed for the lesson, and
- address briefly issues that may arise.

The questions set for the Short Review section of a lesson are designed to remind students of knowledge, skills and understanding developed when first studying the topic area addressed, and that is relevant to the activities to be undertaken in the lesson.

Lesson Component 2 (Lesson Purpose/Intention)

This component offers teachers a chance to acquaint students with the purpose and/or intention of the lesson. It is valuable if students see a link here with their prior knowledge or experience, especially if the teacher can connect it to the responses and levels of understanding evident from students in Component 1.

In addition, this component is an appropriate time to address what students might expect/aim to achieve, i.e., their lesson goal(s). Teachers should clarify, in straightforward language, the learning intention for the students as well as what success will look like. (Note**:** The degree of success or partial success of student learning intention should occur as part of Component 4.)

Lesson Component 3 (Lesson Activity)

Addressing the 'key idea' for the lesson is the focus of Component 3. In the case of the Learning Camp Activity, Component 3 is about students applying known content to solve non-routine problems. This requires students to interpret/understand the meaning of the stem of the problem correctly and then answer a few questions of differing degrees of complexity related to the stem.

Overall, Component 3 has three aspects, 3A, 3B, and 3C. Here in 3A the students are first presented with the stem (stimulus or passage/text or diagram or …) and are given the time/chance to understand the stem of the problem. Then in 3B and 3C two separate set of questions related to the same stem are asked.

Component 3A Reading and Understanding the Stem

3A involves understanding the language of the stem. The purpose here is for:

- the teacher to model fluent reading of the stem (first)
- students to read the passage or describe the figure, …
- any unfamiliar language (possibly addressed in Component 3) to be identified, and
- students to hear and experience fluency in reading the stem.

Component 3B Solving the First Set of Questions

Students are asked to address the questions associated with the stem (3A). The students will recognize that they have a stem (previously met in **3A**) and that this is followed by a small set of questions. Teachers have students read the stem and then find their own way to a response for each question in the set. The students write down responses or attempts at each question. It is important that every student in the class is expected to have a response. An implication here for teachers is the importance of all students starting on time at the same time.

When the students are finished, or sufficient time has been allocated, students provide answers to the questions and the teacher marks the questions.

Component 3C Solving the Second Set of Questions

3C offers a new start for students regardless of how they performed in **3B**. It allows a refresh for student brain processing as a new starting point. It also allows the class to become centered around a new activity.

For teachers this approach serves two purposes. **First,** it is a practical way to bring all students back together to proceed as a group. This way the issues discussed can be considered by every student at the same time. **Second,** the teacher will understand and practice activities where different sets of questions can usually be used with a single Stem. This approach is efficient as students obtain more problem-solving practice on the specific content.

Lesson Component 4

Component 4 is designed to offer a student-focused wrap-up to the main objectives of the lesson. The focus for Component 4 is on the whole lesson. In particular, the focus is about helping students reflect on their progress, achievement, or partial achievement of goals (lesson intention) and their performance and understanding during the lesson. It picks up comments from Component 2 about teacher expectations. There is the chance here to confirm student progress during the lesson.

Component 4 has a high metacognitive aspect for students – thinking about their own thinking – which can be further enhanced by teacher modelling. A teacher may use a diagram or picture to facilitate a discussion about Component 3 as a catalyst to stimulate student discussion and reflection.

Lesson 1: + 0 and + 1

Addition and Subtraction Facts + 0 and – 0 Students fill in the highlighted ones below			
0 + 0 = 0	0 + 0 = 0	0 – 0 = 0	0 – 0 = 0
1 + 0 = 1	0 + 1 = 1	1 – 0 = 1	1 – 1 = 0
2 + 0 = 2	0 + 2 = 2	2 – 0 = 2	2 – 2 = 0
3 + 0 = 3	0 + 3 = 3	3 – 0 = 3	3 – 3 = 0
4 + 0 = 4	0 + 4 = 4	4 – 0 = 4	4 – 4 = 0
5 + 0 = 5	0 + 5 = 5	5 – 0 = 5	5 – 5 = 0
6 + 0 = 6	0 + 6 = 6	6 – 0 = 6	6 – 6 = 0
7 + 0 = 7	0 + 7 = 7	7 – 0 = 7	7 – 7 = 0
8 + 0 = 8	0 + 8 = 8	8 – 0 = 8	8 – 8 = 0
9 + 0 = 9	0 + 9 = 9	9 – 0 = 9	9 – 9 = 0
10 + 0 = 10	0 + 10 = 10	10 – 0 = 10	10 – 10 = 0
11 + 0 = 11	0 + 11 = 11	11 – 0 = 11	11 – 11 = 0
12 + 0 = 12	0 + 12 = 12	12 – 0 = 12	12 – 12 = 0

Addition and Subtraction Facts + 1 and – 1 Students fill in the highlighted ones below			
0 + 1 = 1	1 + 0 = 1	1 – 1 = 0	1 – 0 = 1
1 + 1 = 2	1 + 1 = 2	2 – 1 = 1	2 – 1 = 1
2 + 1 = 3	1 + 2 = 3	3 – 1 = 2	3 – 2 = 1
3 + 1 = 4	1 + 3 = 4	4 – 1 = 3	4 – 3 = 1
4 + 1 = 5	1 + 4 = 5	5 – 1 = 4	5 – 4 = 1
5 + 1 = 6	1 + 5 = 6	6 – 1 = 5	6 – 5 = 1
6 + 1 = 7	1 + 6 = 7	7 – 1 = 6	7 – 6 = 1
7 + 1 = 8	1 + 7 = 8	8 – 1 = 7	8 – 7 = 1
8 + 1 = 9	1 + 8 = 9	9 – 1 = 8	9 – 8 = 1
9 + 1 = 10	1 + 9 = 10	10 – 1 = 9	10 – 9 = 1
10 + 1 = 11	1 + 10 = 11	11 – 1 = 10	11 – 10 = 1
11 + 1 = 12	1 + 11 = 12	12 – 1 = 11	12 – 11 = 1
12 + 1 = 13	1 + 12 = 13	13 – 1 = 12	13 – 12 = 1

Lesson 1 Intention & Language

Lesson Intention

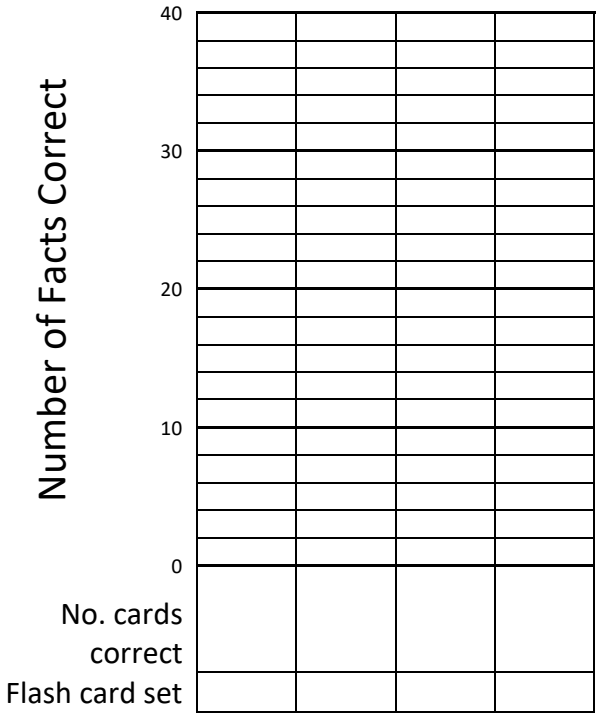
In these Intervention Mathematics lessons, we will be looking at the number facts up to 12. Today our focus is on is adding 0, 1, 2 and 4. In this lesson our focus is adding 0 and 1. While students may know these number facts, can they do the questions fast and get the right answers?

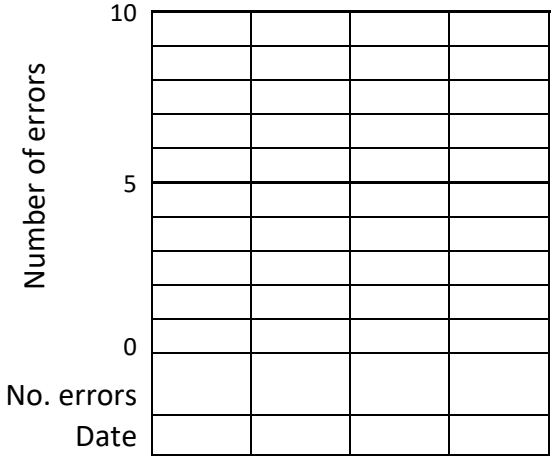
Lesson Language

Add, none, zero.

Lesson 1 Flash Cards Graph

Students work in groups of 2 or 3 and time each other as they answer as many flash cards as they can in one minute. Flash cards are placed in two piles as answered, based on whether correct or incorrect. Students should graph the number of flash cards they had correct and incorrect for each attempt below (with enough space for up to four attempts).





Lesson 1 Speed Questions (+, - 0 & 1)

Students answer as many as they can in 2 minutes, then read out answers (in []) for students to mark.

0 + 3 = [3]	7 - 1 = [6]	9 + 0 = [9]	1 + 0 = [1]
0 + 0 = [0]	[1] + 0 = 1	6 + [1] = 7	0 + [3] = 3
1 + 11 = [12]	12 + 0 = [12]	10 + 0 = [10]	0 + [4] = 4
3 + [1] = 4	0 + 7 = [7]	4 - 1 = [3]	8 + 1 = [9]
[12] + 0 = 12	1 + 6 = [7]	[10] + 1 = 11	[1] + 4 = 5
10 + [0] = 10	1 + [1] = 2	0 + [8] = 8	11 - 0 = [11]
6 - 0 = [6]	12 + [1] = 13	4 + 0 = [4]	7 + 0 = [7]
0 + 5 = [5]	9 + 0 = [9]	[0] + 1 = 1	7 - 1 = [6]
[1] + 7 = 8	1 - 1 = [0]	6 - 1 = [5]	2 + 1 = [3]
2 - 1 = [1]	[3] + 0 = 3	3 + 1 = [4]	[0] + 11 = 11

Students complete: Number Correct _____ Number of Errors _____

Lesson 1 Work Sheet

Answers are shown in bold below for students to mark their work.

1. What number adds to make 10?

a)

7, 3	4, 6	5, **5**	1, **9**
8, **2**	10, **0**	6, **4**	0, **10**
$9\frac{1}{2}$, $\mathbf{\frac{1}{2}}$	3, **7**	9, **1**	2, **8**

b)

6, **4**	3, **7**	8, **2**	$4\frac{1}{2}$, $\mathbf{5\frac{1}{2}}$
5, **5**	2, **8**	9, **1**	1, **9**
7, **3**	4, **6**	0, **10**	10, **0**

Number Correct: _____

2. Fill in the squares so that the numbers in each row and column add up to the printed sums on the right and bottom.

2	1	3
3	**2**	5
5	3	

2	**3**	5
1	2	3
3	5	

1	**2**	3
1	7	8
2	9	

Number Correct: _____

Lesson 1: Four Minute Addition Frenzy

Students write the sum of the column and row numbers in each space for 4 minutes.
Answers provided in squares below for students to mark their work.

+	**0**	**1**	**2**	**1**	**0**	**4**
1	1	2	3	2	1	5
0	0	1	2	1	0	4
10	10	11	12	11	10	14
2	2	3	4	3	2	6
8	8	9	10	9	8	12
4	4	5	6	5	4	8

Number Correct: _____

+	**1**	**5**	**3**	**9**	**7**	**6**
0	1	5	3	9	7	6
1	2	6	4	10	8	7
2	3	7	5	11	9	8
0	1	5	3	9	7	6
4	5	9	7	13	11	10
2	3	7	5	11	9	8

Number Correct: _____

Lesson 1 Bingo

Students choose and write 9 of the answer numbers (from the list of 15 answers given in their workbooks) in the squares within their 3x3 grid. Their grid should have all squares filled with 9 different numbers from the list of answers.

Read out the questions in random order from the list of questions on the right without the answers (which are shown in brackets).

Students cross off the numbers in their grid if the number answers the question. The students call out “Bingo” if they have 3 answers crossed out in a row (down, across or diagonally in the grid). First student to call out Bingo wins. You should check that the student does have Bingo. For a longer game, all the squares in the grid could be required to be crossed off to win.

Questions (+ 0 & 1):

18 + 1 [19]
1 + 0 [1]
15 + 0 [15]
5 + 1 [6]
1 + 11 [12]
10 + 1 [11]
20 + 0 [20]
13 + 1 [14]
8 + 0 [8]
0 + 0 [0]
17 + 1 [18]
10 + 0 [10]
0 + 23 [23]
16 + 1 [17]
1 + 4 [5]

Lesson 2: + 2

Addition and Subtraction Facts + 2 and – 2 Students fill in the highlighted ones below			
0 + 2 = 2	2 + 0 = 2	2 – 2 = 0	2 – 0 = 2
1 + 2 = 3	2 + 1 = 3	3 – 2 = 1	3 – 1 = 2
2 + 2 = 4	2 + 2 = 4	4 – 2 = 2	4 – 2 = 2
3 + 2 = 5	2 + 3 = 5	5 – 2 = 3	5 – 3 = 2
4 + 2 = 6	2 + 4 = 6	6 – 2 = 4	6 – 4 = 2
5 + 2 = 7	2 + 5 = 7	7 – 2 = 5	7 – 5 = 2
6 + 2 = 8	2 + 6 = 8	8 – 2 = 6	8 – 6 = 2
7 + 2 = 9	2 + 7 = 9	9 – 2 = 7	9 – 7 = 2
8 + 2 = 10	2 + 8 = 10	10 – 2 = 8	10 – 8 = 2
9 + 2 = 11	2 + 9 = 11	11 – 2 = 9	11 – 9 = 2
10 + 2 = 12	2 + 10 = 12	12 – 2 = 10	12 – 10 = 2
11 + 2 = 13	2 + 11 = 13	13 – 2 = 11	13 – 11 = 2
12 + 2 = 14	2 + 12 = 14	14 – 2 = 12	14 – 12 = 2

Lesson 2 Intention & Language

Lesson Intention

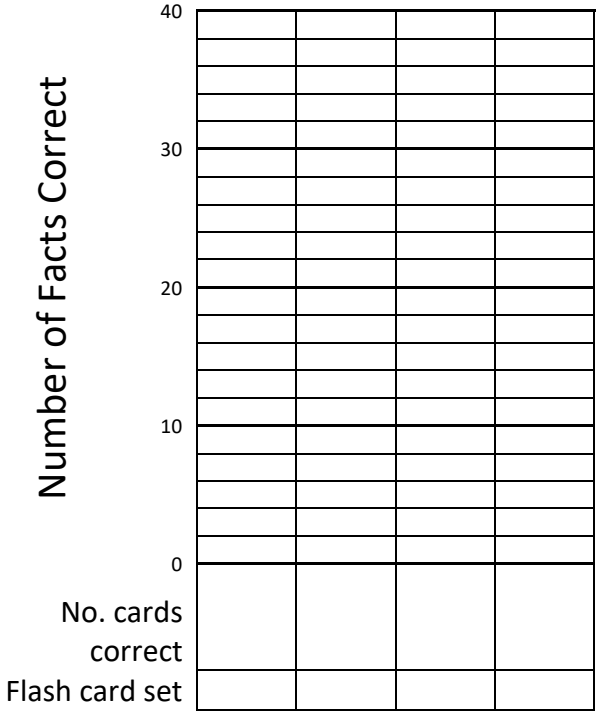
In these Intervention Mathematics lessons, we are looking at the number facts up to 12. Today our focus is on is adding 0, 1, 2 and 4. In our earlier lesson today we looked at adding 0 and 1. In this lesson our focus is adding 2. While students may know these number facts, can they do the questions fast and get the right answers?

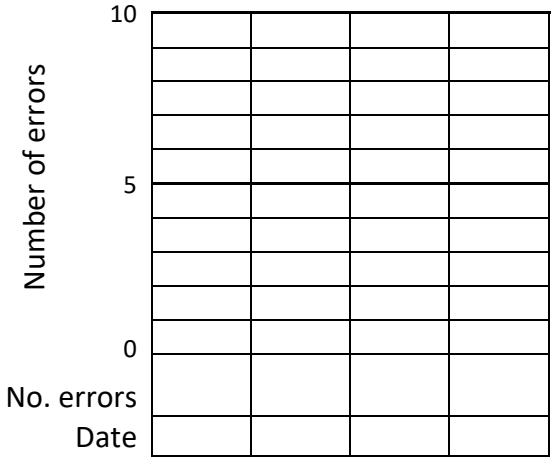
Lesson Language

Plus, addition, sum.

Lesson 2 Flash Cards Graph

Students work in groups of 2 or 3 and time each other as they answer as many flash cards as they can in one minute. Flash cards are placed in two piles as answered, based on whether correct or incorrect. Students should graph the number of flash cards they had correct and incorrect for each attempt below (with enough space for up to four attempts).





Lesson 2 Speed Questions (+ & - 2)

Students answer as many as they can in 2 minutes, then read out answers (in []) for students to mark.

2 + 4 = [6]	[0] + 2 = 2	2 + [0] = 2	[2] + 5 = 7
2 + 11 = [13]	5 - 2 = [3]	2 + [1] = 3	2 + 8 = [10]
[2] + 1 = 3	2 + [2] = 4	2 + 7 = [9]	12 + 2 = [14]
6 - 2 = [4]	3 + [2] = 5	[11] + 2 = 13	2 + [11] = 13
2 + [7] = 9	2 + 12 = [14]	8 - 2 = [6]	9 + [2] = 11
2 + 2 = [4]	9 + 2 = [11]	4 + 2 = [6]	4 - 2 = [2]
8 + 2 = [10]	11 - 2 = [9]	[6] + 2 = 8	10 + 2 = [12]
[2] + 6 = 8	[2] + 2 = 4	2 + 5 = [7]	10 - 2 = [8]
2 - 2 = [0]	6 + 2 = [8]	2 + 3 = [5]	[5] + 2 = 7
2 + [5] = 7	12 + 2 = [14]	12 - 2 = [10]	2 + 3 = [5]

Number Correct _____ Number of Errors _____

Lesson 2 Work Sheet

Answers are shown in bold below for students to mark their work.

1. What number adds to make 10?

a)

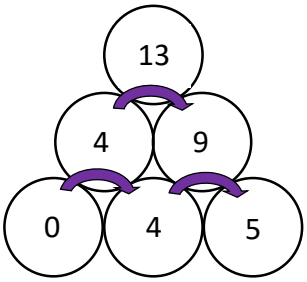
6, **4**	1, **9**	4, **6**	$1\frac{2}{3}$, $\mathbf{8\frac{1}{3}}$
5, **5**	4, **6**	$2\frac{1}{2}$, $\mathbf{7\frac{1}{2}}$	9, **1**
$5\frac{1}{3}$, $\mathbf{4\frac{2}{3}}$	7, **3**	6, **4**	8, **2**

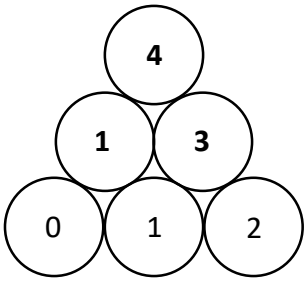
b)

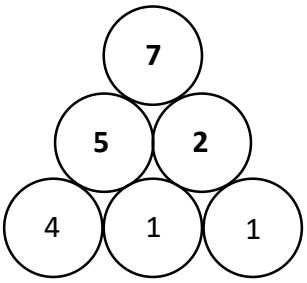
8, **2**	3, **7**	$9\frac{2}{3}$, $\frac{1}{3}$	2, **8**
10, **0**	7, **3**	4, **6**	5, **5**
6, **4**	4, **6**	$6\frac{1}{3}$, $\mathbf{3\frac{2}{3}}$	2, **8**

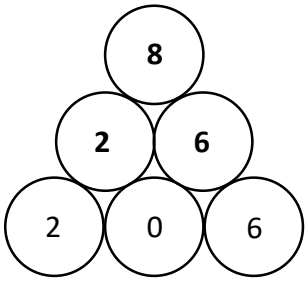
Number Correct: _____

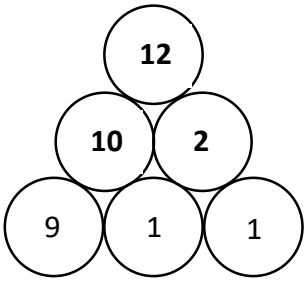
2. Fill in the empty circles with the sum of the 2 numbers next to each other in a row in the circle above the 2 numbers. The first one is done for you.

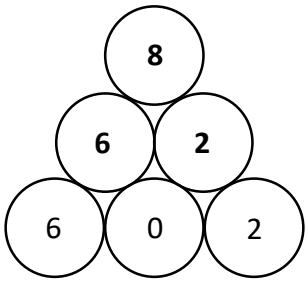












Number Correct: _____

3. Fill in the squares so that the numbers in each row and column add up to the printed sums on the right and bottom.

3	**1**	4
2	**7**	9
5	8	

7	**2**	9
2	**3**	5
9	5	

2	**5**	7
8	**1**	9
10	6	

Number Correct: _____

Lesson 2: Four Minute Addition Frenzy

Students write the sum of the column and row numbers in each space for 4 minutes.
Answers provided in squares below for students to mark their work.

+	**0**	**1**	**2**	**1**	**2**	**4**
2	2	3	4	3	4	6
9	9	10	11	10	11	13
8	8	9	10	9	10	12
4	4	5	6	5	6	8
7	7	8	9	8	9	11
1	1	2	3	2	3	5

Number Correct: _____

+	**10**	**5**	**6**	**3**	**0**	**2**
2	12	7	8	5	2	4
1	11	6	7	4	1	3
4	14	9	10	7	4	6
0	10	5	6	3	0	2
4	14	9	10	7	4	6
2	12	7	8	5	2	4

Number Correct: _____

Lesson 2 Bingo

Students choose and write 9 of the answer numbers (from the list of 15 answers given in their workbooks) in the squares within their 3x3 grid. Their grid should have all squares filled with 9 different numbers from the list of answers.

Read out the questions in random order from the list of questions on the right without the answers (which are shown in brackets).

Students cross off the numbers in their grid if the number answers the question. The students call out "Bingo" if they have 3 answers crossed out in a row (down, across or diagonally in the grid). First student to call out Bingo wins. You should check that the student does have Bingo. For a longer game, all the squares in the grid could be required to be crossed off to win.

Questions (+2):

3 + 2 [5]
10 + 2 [12]
2 + 1 [3]
20 + 2 [22]
16 + 2 [18]
2 + 5 [7]
0 + 2 [2]
17 + 2 [19]
15 + 2 [17]
2 + 2 [4]
9 + 2 [11]
2 + 4 [6]
8 + 2 [10]
14 + 2 [16]
13 + 2 [15]

Lesson 3: + 4

Addition and Subtraction Facts + 4 and – 4 Students fill in the highlighted ones below			
0 + 4 = 4	4 + 0 = 4	4 – 4 = 0	4 – 0 = 4
1 + 4 = 5	4 + 1 = 5	5 – 4 = 1	5 – 1 = 4
2 + 4 = 6	4 + 2 = 6	6 – 4 = 2	6 – 2 = 4
3 + 4 = 7	4 + 3 = 7	7 – 4 = 3	7 – 3 = 4
4 + 4 = 8	4 + 4 = 8	8 – 4 = 4	8 – 4 = 4
5 + 4 = 9	4 + 5 = 9	9 – 4 = 5	9 – 5 = 4
6 + 4 = 10	4 + 6 = 10	10 – 4 = 6	10 – 6 = 4
7 + 4 = 11	4 + 7 = 11	11 – 4 = 7	11 – 7 = 4
8 + 4 = 12	4 + 8 = 12	12 – 4 = 8	12 – 8 = 4
9 + 4 = 13	4 + 9 = 13	13 – 4 = 9	13 – 9 = 4
10 + 4 = 14	4 + 10 = 14	14 – 4 = 10	14 – 10 = 4
11 + 4 = 15	4 + 11 = 15	15 – 4 = 11	15 – 11 = 4
12 + 4 = 16	4 + 12 = 16	16 – 4 = 12	16 – 12 = 4

Lesson 3 Intention & Language

Lesson Intention

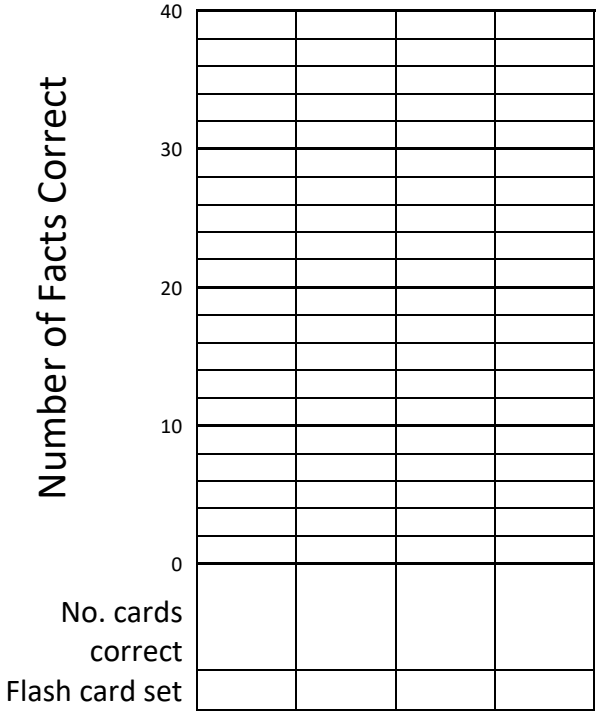
In these Intervention Mathematics lessons, we are looking at the number facts up to 12. Today our focus is on is adding 0, 1, 2 and 4. In our earlier lessons today we looked at adding 0, 1 and 2. In this lesson our focus is adding 4. While students may know these number facts, can they do the questions fast and get the right answers?

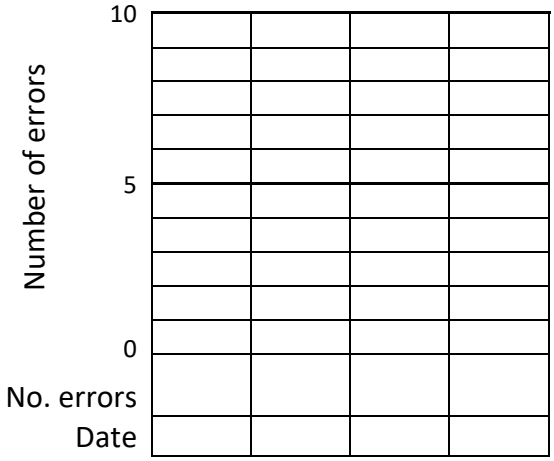
Lesson Language

Total, together, altogether.

Lesson 3 Flash Cards Graph

Students work in groups of 2 or 3 and time each other as they answer as many flash cards as they can in one minute. Flash cards are placed in two piles as answered, based on whether correct or incorrect. Students should graph the number of flash cards they had correct and incorrect for each attempt below (with enough space for up to four attempts).





Lesson 3 Speed Questions (+ & - 4)

Students answer as many as they can in 2 minutes, then read out answers (in []) for students to mark.

9 + 4 = [13]	1 + 4 = [5]	0 + 4 = [4]	4 + 9 = [13]
4 + 4 = [8]	9 - 4 = [5]	[4] + 2 = 6	11 + 4 = [15]
[4] + 11 = 15	4 + 3 = [7]	4 + 3 = [7]	4 + 5 = [9]
[4] + 10 = 14	[4] + 7 = 11	[6] + 4 = 10	8 - 4 = [4]
2 + 4 = [6]	4 + 9 = [13]	4 + [1] = 5	5 + [4] = 9
6 - 4 = [2]	[1] + 4 = 5	4 + 7 = 11	2 + 4 = [6]
4 - 0 = [4]	4 + [5] = 9	4 + [2] = 6	[8] + 4 = 12
4 + [1] = 5	11 - 7 = [4]	4 - 2 = [2]	9 - 4 = [5]
10 + 4 = [14]	2 + [4] = 6	4 - 1 = [3]	10 + [4] = 14
4 + [10] = 14	11 + 4 = [15]	4 + 4 = [8]	[4] + 5 = 9

Number Correct _____ Number of Errors _____

Lesson 3 Work Sheet

Answers are shown in bold below for students to mark their work.

1. What number adds to make 100?

a)

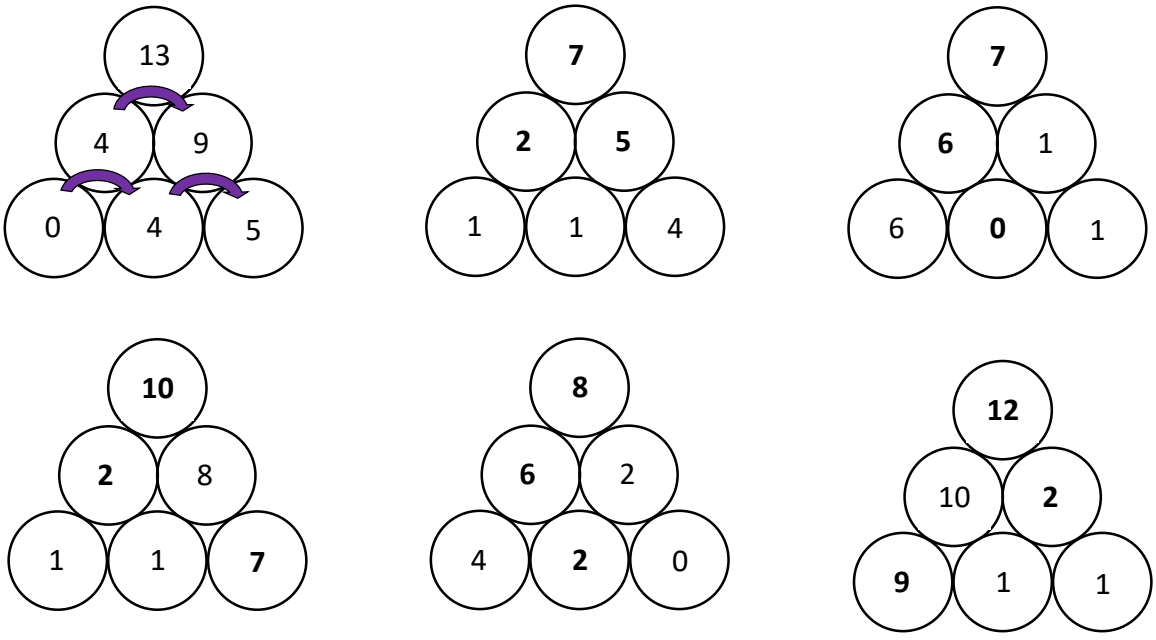
20, **80**	43, **57**	67, **33**	15, **85**
90, **10**	10, **90**	1, **99**	33, **67**
88, **12**	25, **75**	73, **27**	93, **7**

b)

43, **57**	31, **69**	82, **18**	41, **59**
59, **41**	26, **74**	19, **81**	11, **89**
4, **96**	77, **23**	62, **38**	49, **51**

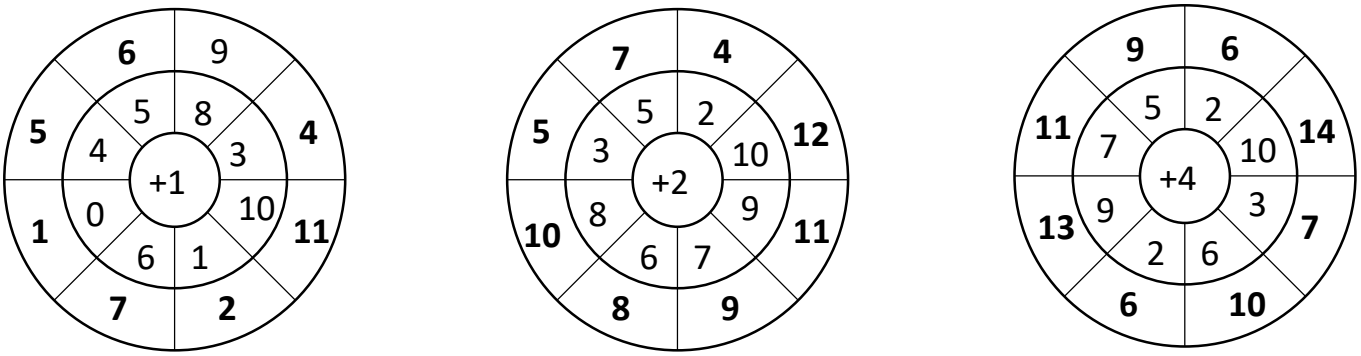
Number Correct: _____

2. Fill in the empty circles with the sum of the 2 numbers next to each other in a row in the circle above the 2 numbers. The first one is done for you.



Number Correct: _____

3. Add the center number and the number in the middle circle and write your answer in the space. The first one is done for you.



Number Correct: _____

Lesson 3: Four Minute Addition Frenzy

Students write the sum of the column and row numbers in each space for 4 minutes.
Answers provided in squares below for students to mark their work.

+	**2**	**4**	**0**	**1**	**4**	**2**
4	6	8	4	5	8	6
0	2	4	0	1	4	2
3	5	7	3	4	7	5
10	12	14	10	11	14	12
8	10	12	8	9	12	10
5	7	9	5	6	9	7

Number Correct: _____

+	**7**	**1**	**2**	**9**	**6**	**4**
2	9	3	4	11	8	6
1	8	2	3	10	7	5
4	11	5	6	13	10	8
0	7	1	2	9	6	4
4	11	5	6	13	10	8
2	9	3	4	11	8	6

Number Correct: _____

Lesson 3 Reflection & Metacognition

Students answer the questions below.

What did you learn today?

What were your improvements today?

How confident do you feel about today's focus topic of adding 0, 1, 2 and 4 after today's lessons? Circle one below:


I am not sure/confused about this topic


I have some questions about this topic


I think I can do this topic


I am sure I can do this topic

Lesson 4: + 3

Addition and Subtraction Facts + 3 and – 3 Students fill in the highlighted ones below			
0 + 3 = 3	3 + 0 = 3	3 – 3 = 0	3 – 0 = 3
1 + 3 = 4	3 + 1 = 4	4 – 3 = 1	4 – 1 = 3
2 + 3 = 5	3 + 2 = 5	5 – 3 = 2	5 – 2 = 3
3 + 3 = 6	3 + 3 = 6	6 – 3 = 3	6 – 3 = 3
4 + 3 = 7	3 + 4 = 7	7 – 3 = 4	7 – 4 = 3
5 + 3 = 8	3 + 5 = 8	8 – 3 = 5	8 – 5 = 3
6 + 3 = 9	3 + 6 = 9	9 – 3 = 6	9 – 6 = 3
7 + 3 = 10	3 + 7 = 10	10 – 3 = 7	10 – 7 = 3
8 + 3 = 11	3 + 8 = 11	11 – 3 = 8	11 – 8 = 3
9 + 3 = 12	3 + 9 = 12	12 – 3 = 9	12 – 9 = 3
10 + 3 = 13	3 + 10 = 13	13 – 3 = 10	13 – 10 = 3
11 + 3 = 14	3 + 11 = 14	14 – 3 = 11	14 – 11 = 3
12 + 3 = 15	3 + 12 = 15	15 – 3 = 12	15 – 12 = 3

Lesson 4 Intention & Language

Lesson Intention

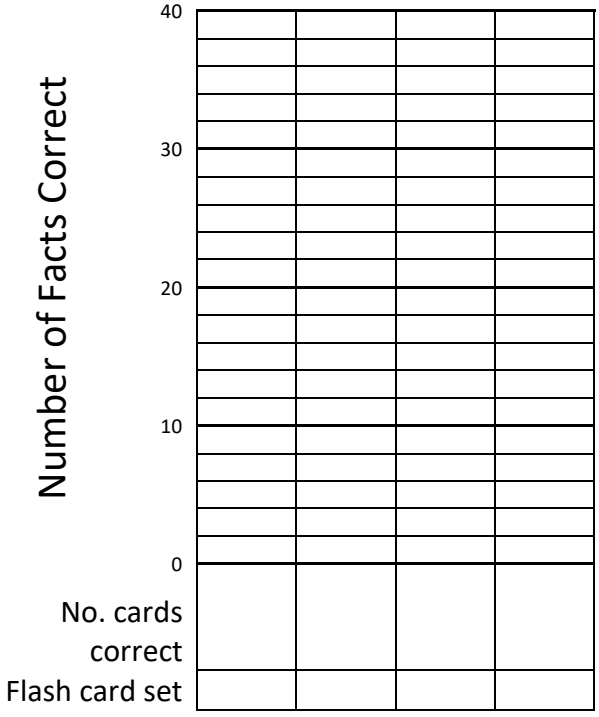
In these Intervention Mathematics lessons, we are looking at the number facts up to 12. Today our focus is on is adding 3, 10, and 11. In this lesson our focus is adding 3. While students may know these number facts, can they do the questions fast and get the right answers?

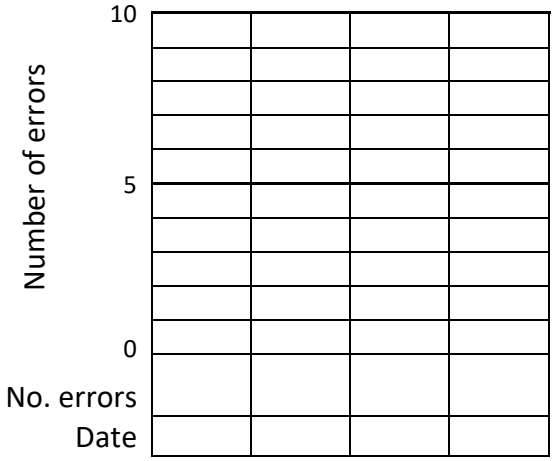
Lesson Language

More, increase, increased by.

Lesson 4 Flash Cards Graph

Students work in groups of 2 or 3 and time each other as they answer as many flash cards as they can in one minute. Flash cards are placed in two piles as answered, based on whether correct or incorrect. Students should graph the number of flash cards they had correct and incorrect for each attempt below (with enough space for up to four attempts).





Lesson 4 Speed Questions (+ & - 3)

Students answer as many as they can in 2 minutes, then read out answers (in []) for students to mark.

3 + 9 = [12]	8 + 3 = [11]	[3] + 4 = 7	3 + 2 = [5]
3 + 0 = [3]	3 + [6] = 9	3 + [11] = 14	3 + [3] = 6
5 + 3 = [8]	3 + [8] = 11	3 + [10] = 13	4 - 3 = [1]
[3] + 5 = 8	1 + 3 = [4]	3 - 1 = [2]	3 + 3 = [6]
[8] + 3 = 11	8 - 3 = [5]	7 + 3 = [10]	3 + 5 = [8]
5 - 3 = [2]	6 + 3 = [9]	9 + 3 = [12]	4 + [3] = 7
9 + 3 = [12]	[3] + 7 = 10	11 - 3 = [8]	[3] + 11 = 14
6 - 3 = [3]	[3] + 8 = 11	[12] + 3 = 15	3 + 9 = [12]
3 + [3] = 6	3 - 1 = [2]	10 + 3 = [13]	11 - 3 = [8]
3 + [8] = 11	3 + 10 = [13]	1 + 3 = [4]	[3] + 7 = 10

Number Correct _____ Number of Errors _____

Lesson 4 Work Sheet

Answers are shown in bold below for students to mark their work.

1. What number adds to make 100?

a.

10, **90**	92, **8**	33, **67**	3, **97**
21, **79**	88, **12**	12, **88**	73, **27**
53, **47**	20, **80**	15, **85**	67, **33**

b.

23, **77**	81, **19**	42, **58**	49, **51**
51, **49**	28, **72**	99, **1**	91, **9**
24, **76**	75, **25**	69, **31**	31, **69**

Number Correct: _____

2. Fill in the squares so that the numbers in each row and column add up to the printed sums on the right and bottom.

3	**2**	5
4	**6**	10
7	8	

7	4	11
1	**4**	5
8	8	

2	**9**	11
3	**3**	6
5	12	

Number Correct: _____

3. Apply the rule to the input number to make the output number.

Input	Rule	Output
10	+3	**13**
5	+3	**8**
7	+3	10
2	+3	**5**
6	+3	9

Input	Rule	Output
2	+4	**6**
5	+4	9
9	+4	**13**
6	+4	10
10	+4	14

Number Correct: _____

Lesson 4: Four Minute Addition Frenzy

Students write the sum of the column and row numbers in each space for 4 minutes.
Answers provided in squares below for students to mark their work.

+	**3**	**1**	**4**	**0**	**3**	**2**	**4**
4	7	5	8	4	7	6	8
2	5	3	6	2	5	4	6
10	13	11	14	10	13	12	14
5	8	6	9	5	8	7	9
1	4	2	5	1	4	3	5
3	6	4	7	3	6	5	7
4	7	5	8	4	7	6	8

Number Correct: _____

+	**6**	**0**	**7**	**9**	**4**	**8**	**4**
4	10	4	11	13	8	12	8
0	6	0	7	9	4	8	4
4	10	4	11	13	8	12	8
2	8	2	9	11	6	10	6
3	9	3	10	12	7	11	7
1	7	1	8	10	5	9	5
3	9	3	10	12	7	11	7

Number Correct: _____

Lesson 4 Bingo

Students choose and write 9 of the answer numbers (from the list of 15 answers given in their workbooks) in the squares within their 3x3 grid. Their grid should have all squares filled with 9 different numbers from the list of answers.

Read out the questions in random order from the list of questions on the right without the answers (which are shown in brackets).

Students cross off the numbers in their grid if the number answers the question. The students call out “Bingo” if they have 3 answers crossed out in a row (down, across or diagonally in the grid). First student to call out Bingo wins. You should check that the student does have Bingo. For a longer game, all the squares in the grid could be required to be crossed off to win.

Questions (+3):

11 + 3 [14]
3 + 3 [6]
3 + 10 [13]
6 + 3 [9]
1 + 3 [4]
5 + 3 [8]
13 + 3 [16]
20 + 3 [23]
3 + 4 [7]
8 + 3 [11]
3 + 2 [5]
3 + 0 [3]
7 + 3 [10]
12 + 3 [15]
9 + 3 [12]

Lesson 5: + 10

Addition and Subtraction Facts + 10 and – 10 Students fill in the highlighted ones below			
0 + 10 = 10	10 + 0 = 10	10 – 10 = 0	10 – 0 = 10
1 + 10 = 11	10 + 1 = 11	11 – 10 = 1	11 – 1 = 10
2 + 10 = 12	10 + 2 = 12	12 – 10 = 2	12 – 2 = 10
3 + 10 = 13	10 + 3 = 13	13 – 10 = 3	13 – 3 = 10
4 + 10 = 14	10 + 4 = 14	14 – 10 = 4	14 – 4 = 10
5 + 10 = 15	10 + 5 = 15	15 – 10 = 5	15 – 5 = 10
6 + 10 = 16	10 + 6 = 16	16 – 10 = 6	16 – 6 = 10
7 + 10 = 17	10 + 7 = 17	17 – 10 = 7	17 – 7 = 10
8 + 10 = 18	10 + 8 = 18	18 – 10 = 8	18 – 8 = 10
9 + 10 = 19	10 + 9 = 19	19 – 10 = 9	19 – 9 = 10
10 + 10 = 20	10 + 10 = 20	20 – 10 = 10	20 – 10 = 10
11 + 10 = 21	10 + 11 = 21	21 – 10 = 11	21 – 11 = 10
12 + 10 = 22	10 + 12 = 22	22 – 10 = 12	22 – 12 = 10

Lesson 5 Intention & Language

Lesson Intention

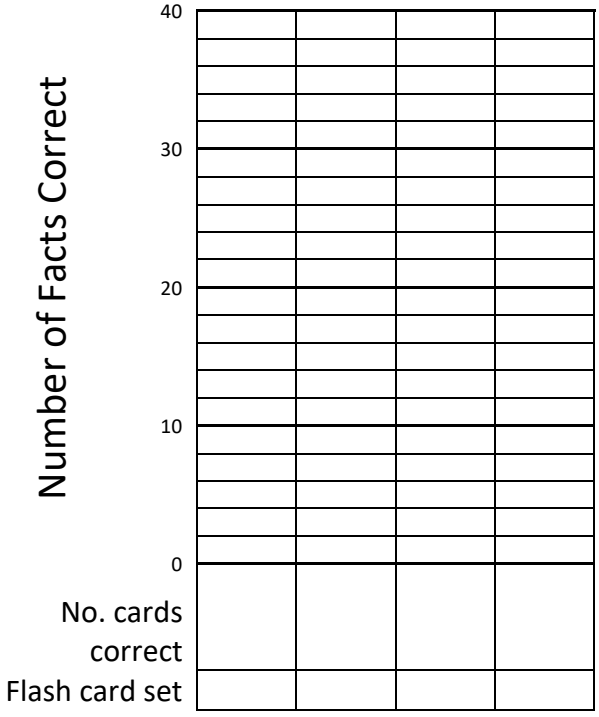
In these Intervention Mathematics lessons, we are looking at the number facts up to 12. Today our focus is on is adding 3, 10, and 11. In our earlier lesson today we looked at adding 3. In this lesson our focus is adding 10. While students may know these number facts, can they do the questions fast and get the right answers?

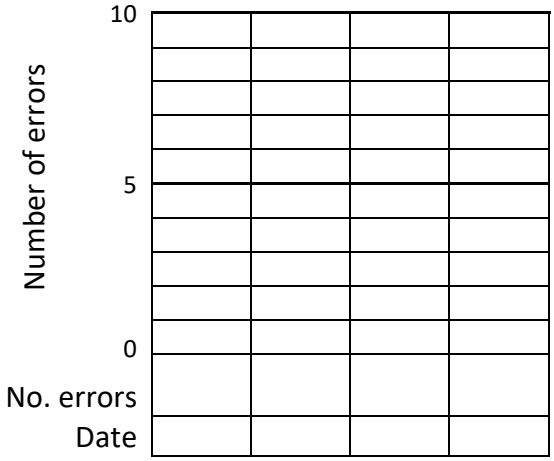
Lesson Language

All, in all, result.

Lesson 5 Flash Cards Graph

Students work in groups of 2 or 3 and time each other as they answer as many flash cards as they can in one minute. Flash cards are placed in two piles as answered, based on whether correct or incorrect. Students should graph the number of flash cards they had correct and incorrect for each attempt below (with enough space for up to four attempts).





Lesson 5 Speed Questions (+ & - 10)

Students answer as many as they can in 2 minutes, then read out answers (in []) for students to mark.

2 + 10 = [12]	8 + 10 = [18]	4 + 10 = [14]	1 + 10 = [11]
10 + 12 = [22]	4 + [10] = 14	10 + 3 = [13]	[0] + 10 = 0
10 + 4 = [14]	10 + [5] = 15	[2] + 10 = 12	7 + 10 = [17]
10 - 8 = [2]	10 + 3 = [13]	[10] + 2 = 12	11 + [10] = 21
6 + [10] = 16	10 + 6 = [16]	10 - 8 = [2]	10 - 3 = [7]
10 + [6] = 16	[10] + 11 = 21	5 + 10 = [15]	10 + [9] = 19
[10] + 9 = 19	10 - 10 = [0]	10 + [11] = 21	11 + 10 = [21]
10 - 9 = [1]	10 - 8 = [2]	10 + 10 = [20]	[4] + 10 = 14
[1] + 10 = 11	10 + 0 = [10]	1 + [10] = 11	10 - 5 = [5]
2 + 10 = [12]	[7] + 10 = 17	11 - 10 = [1]	4 + 10 = [14]

Number Correct _____ Number of Errors _____

Lesson 5 Work Sheet

Answers are shown in bold below for students to mark their work.

1. What number adds to make 100?

a)

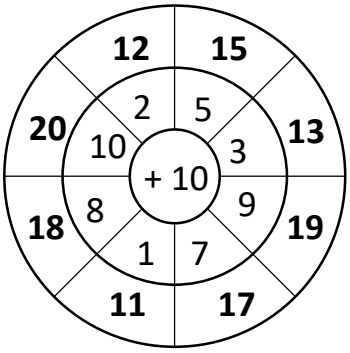
55, **45**	78, **22**	24, **76**	85, **15**
48, **52**	17, **83**	57, **43**	66, **34**
94, **6**	49, **51**	52, **48**	89, **11**

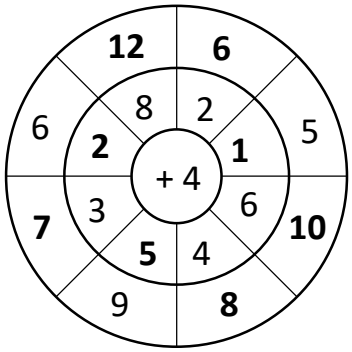
b)

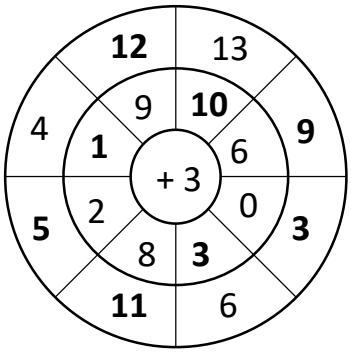
33, **67**	18, **82**	24, **76**	96, **4**
15, **85**	82, **18**	9, **91**	19, **81**
42, **58**	67, **33**	96, **4**	14, **86**

Number Correct: _____

2. Add the number to the middle number and write your answer in the space.

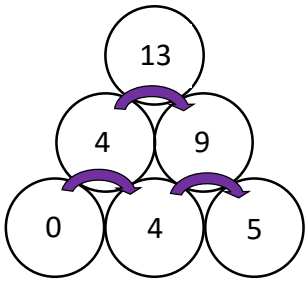


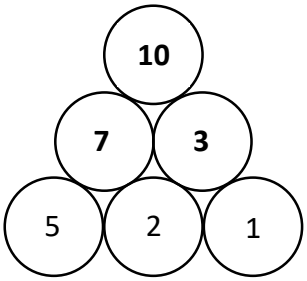


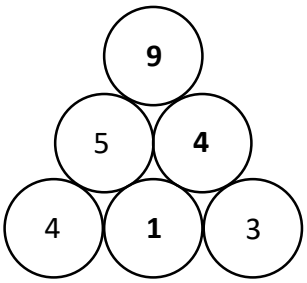


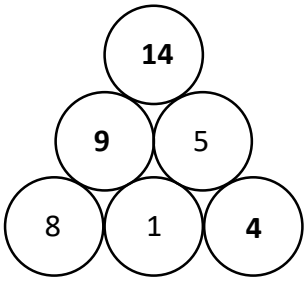
Number Correct: _____

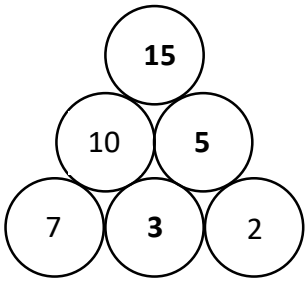
3. Fill in the empty circles with the sum of the 2 numbers next to each other in a row in the circle above the 2 numbers. The first one is done for you.

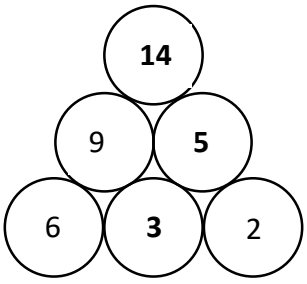












Number Correct: _____

Lesson 5: Four Minute Addition Frenzy

Students write the sum of the column and row numbers in each space for 4 minutes.
Answers provided in squares below for students to mark their work.

+	**10**	**3**	**2**	**0**	**1**	**3**	**4**
10	20	13	12	10	11	13	14
5	15	8	7	5	6	8	9
2	12	5	4	2	3	5	6
1	11	4	3	1	2	4	5
3	13	6	5	3	4	6	7
0	10	3	2	0	1	3	4
4	14	7	6	4	5	7	8

Number Correct: _____

+	**1**	**6**	**10**	**8**	**3**	**7**	**9**
3	4	9	13	11	6	10	12
10	11	16	20	18	13	17	19
2	3	8	12	10	5	9	11
1	2	7	11	9	4	8	10
3	4	9	13	11	6	10	12
4	5	10	14	12	7	11	13
10	11	16	20	18	13	17	19

Number Correct: _____

Lesson 5 Bingo

Students choose and write 9 of the answer numbers (from the list of 15 answers given in their workbooks) in the squares within their 3x3 grid. Their grid should have all squares filled with 9 different numbers from the list of answers.

Read out the questions in random order from the list of questions on the right without the answers (which are shown in brackets).

Students cross off the numbers in their grid if the number answers the question. The students call out "Bingo" if they have 3 answers crossed out in a row (down, across or diagonally in the grid). First student to call out Bingo wins. You should check that the student does have Bingo. For a longer game, all the squares in the grid could be required to be crossed off to win.

Questions (+10):

0 + 10 [10]
3 + 10 [13]
10 + 10 [20]
10 + 2 [12]
10 + 5 [15]
11 + 10 [21]
15 + 10 [25]
4 + 10 [14]
6 + 10 [16]
20 + 10 [30]
10 + 7 [17]
9 + 10 [19]
12 + 10 [22]
1 + 10 [11]
8 + 10 [18]

Lesson 6: + 11

Addition and Subtraction Facts + 11 and – 11 Students fill in the highlighted ones below			
0 + 11 = 11	11 + 0 = 11	11 – 11 = 0	11 – 0 = 11
1 + 11 = 12	11 + 1 = 12	12 – 11 = 1	12 – 1 = 11
2 + 11 = 13	11 + 2 = 13	13 – 11 = 2	13 – 2 = 11
3 + 11 = 14	11 + 3 = 14	14 – 11 = 3	14 – 3 = 11
4 + 11 = 15	11 + 4 = 15	15 – 11 = 4	15 – 4 = 11
5 + 11 = 16	11 + 5 = 16	16 – 11 = 5	16 – 5 = 11
6 + 11 = 17	11 + 6 = 17	17 – 11 = 5	17 – 6 = 11
7 + 11 = 18	11 + 7 = 18	18 – 11 = 7	18 – 7 = 11
8 + 11 = 19	11 + 8 = 19	19 – 11 = 8	19 – 8 = 11
9 + 11 = 20	11 + 9 = 20	20 – 11 = 9	20 – 9 = 11
10 + 11 = 21	11 + 10 = 21	21 – 11 = 10	21 – 10 = 11
11 + 11 = 22	11 + 11 = 22	22 – 11 = 11	22 – 11 = 11
12 + 11 = 23	11 + 12 = 23	23 – 11 = 12	23 – 12 = 11

Lesson 6 Intention & Language

Lesson Intention

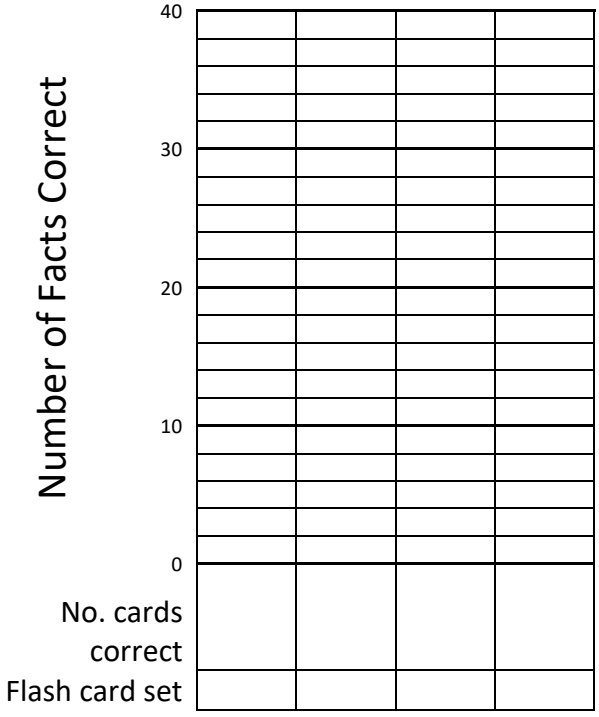
In these Intervention Mathematics lessons, we are looking at the number facts up to 12. Today our focus is on is adding 3, 10, and 11. In our earlier lessons today we looked at adding 3 and 10. In this lesson our focus is adding 11. While students may know these number facts, can they do the questions fast and get the right answers?

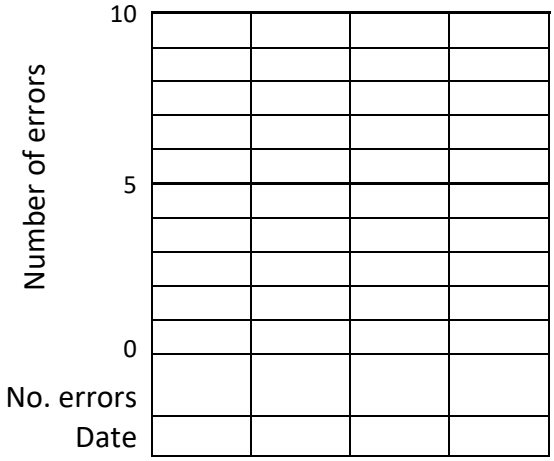
Lesson Language

Add in, add on, include.

Lesson 6 Flash Cards Graph

Students work in groups of 2 or 3 and time each other as they answer as many flash cards as they can in one minute. Flash cards are placed in two piles as answered, based on whether correct or incorrect. Students should graph the number of flash cards they had correct and incorrect for each attempt below (with enough space for up to four attempts).





Lesson 6 Speed Questions (+ & - 11)

Students answer as many as they can in 2 minutes, then read out answers (in []) for students to mark.

2 + 11 = [13]	8 + 11 = [19]	12 + 11 = [23]	5 + 11 = [16]
11 + 12 = [23]	11 - 10 = [1]	[11] + 6 = 17	[11] + 10 = 21
11 + [0] = 11	0 + 11 = [11]	7 + 11 = [18]	11 - 4 = [7]
11 + 9 = [20]	5 + [11] = 16	9 + 11 = [20]	11 + 1 = [12]
11 - 4 = [7]	[11] + 11 = 22	8 + [11] = 19	11 + [2] = 13
6 + [11] = 17	3 + 11 = [14]	11 - 3 = [8]	[11] + 1 = 12
11 + 10 = [21]	11 + 6 = [17]	11 + [11] = 22	7 + [11] = 18
[7] + 11 = 18	11 - 11 = [0]	1 + 11 = [12]	11 + 0 = [11]
[1] + 11 = 12	[11] + 1 = 12	[11] + 8 = 19	11 - 8 = [3]
11 - 6 = [5]	11 + [10] = 21	11 - 5 = [6]	4 + 11 = [15]

Number Correct _____ Number of Errors _____

Lesson 6 Work Sheet

Answers are shown in bold below for students to mark their work.

1. Round to the nearest ten.

a) 17 **20**

b) 3 **0**

c) 71 **70**

d) 46 **50**

e) 159 **160**

f) 35 **40**

Number Correct: _____

2. Fill in the squares so that the numbers in each row and column add up to the printed sums on the right and bottom.

11	**2**	13
4	**5**	9
15	7	

2	11	13
10	**0**	10
12	11	

3	**4**	7
11	**6**	17
14	10	

Number Correct: _____

3. Use the digits 0 to 9 to fill the cells in the grid. The columns must add up to the given sums at the bottom. You must use all the digits 0 to 9 in each row, but digits may be repeated in columns. The digits in connecting unshaded cells (also diagonally) must be different.

a)

6	8	4	**0**	9	**5**	7	1	**2**	3
7	**3**	**1**	**6**	4	2	**9**	8	0	**5**
13	11	5	6	13	7	16	9	2	8

b)

9	1	**7**	2	5	**3**	**0**	**4**	**8**	6
7	3	**6**	8	**0**	2	**1**	5	**9**	4
16	4	13	10	5	5	1	9	17	10

Number Correct: _____

Lesson 6: Four Minute Addition Frenzy

Students write the sum of the column and row numbers in each space for 4 minutes.
Answers provided in squares below for students to mark their work.

+	**10**	**3**	**2**	**0**	**1**	**11**	**4**
3	13	6	5	3	4	14	7
0	10	3	2	0	1	11	4
4	14	7	6	4	5	15	8
1	11	4	3	1	2	12	5
10	20	13	12	10	11	21	14
5	15	8	7	5	6	16	9
2	12	5	4	2	3	13	6

Number Correct: _____

+	**1**	**6**	**10**	**8**	**3**	**7**	**9**
11	12	17	21	19	14	18	20
4	5	10	14	12	7	11	13
10	11	16	20	18	13	17	19
3	4	9	13	11	6	10	12
1	2	7	11	9	4	8	10
0	1	6	10	8	3	7	9
2	3	8	12	10	5	9	11

Number Correct: _____

Lesson 6 Reflection & Metacognition

Students answer the questions below.

What did you learn today?

_____

_____

_____

What were your improvements today?

_____

_____

_____

How confident do you feel about today's focus topic of adding 3, 10 and 11 after today's lessons? Circle one below:

I am not sure/confused about this topic

I have some questions about this topic

I think I can do this topic

I am sure I can do this topic

Lesson 7: + 9

Addition and Subtraction Facts + 9 and – 9 Students fill in the highlighted ones below			
0 + 9 = 9	9 + 0 = 9	9 – 9 = 0	9 – 0 = 9
1 + 9 = 10	9 + 1 = 10	10 – 9 = 1	10 – 1 = 9
2 + 9 = 11	9 + 2 = 11	11 – 9 = 2	11 – 2 = 9
3 + 9 = 12	9 + 3 = 12	12 – 9 = 3	12 – 3 = 9
4 + 9 = 13	9 + 4 = 13	13 – 9 = 4	13 – 4 = 9
5 + 9 = 14	9 + 5 = 14	14 – 9 = 5	14 – 5 = 9
6 + 9 = 15	9 + 6 = 15	15 – 9 = 6	15 – 6 = 9
7 + 9 = 16	9 + 7 = 16	16 – 9 = 7	16 – 7 = 9
8 + 9 = 17	9 + 8 = 17	17 – 9 = 8	17 – 8 = 9
9 + 9 = 18	9 + 9 = 18	18 – 9 = 9	18 – 9 = 9
10 + 9 = 19	9 + 10 = 19	19 – 9 = 10	19 – 10 = 9
11 + 9 = 20	9 + 11 = 20	20 – 9 = 11	20 – 11 = 9
12 + 9 = 21	9 + 12 = 21	21 – 9 = 12	21 – 12 = 9

Lesson 7 Intention & Language

Lesson Intention

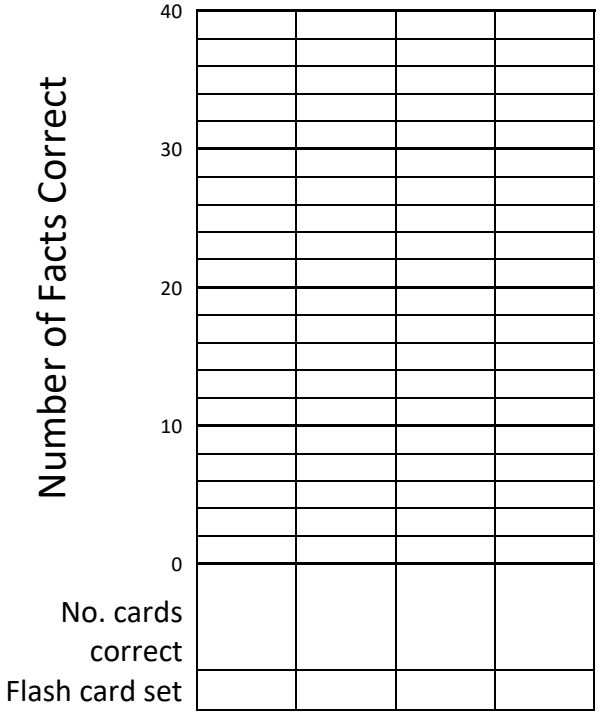
In these Intervention Mathematics lessons, we are looking at the number facts up to 12. Today our focus is on is adding 5, 6 and 9. In this lesson our focus is adding 9. While students may know these number facts, can they do the questions fast and get the right answers?

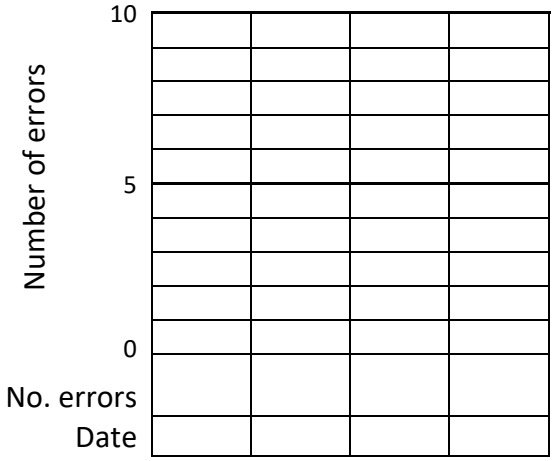
Lesson Language

Tally, net, count.

Lesson 7 Flash Cards Graph

Students work in groups of 2 or 3 and time each other as they answer as many flash cards as they can in one minute. Flash cards are placed in two piles as answered, based on whether correct or incorrect. Students should graph the number of flash cards they had correct and incorrect for each attempt below (with enough space for up to four attempts).





Lesson 7 Speed Questions (+ & - 9)

Students answer as many as they can in 2 minutes, then read out answers (in []) for students to mark.

9 + [6] = 15	9 + [11] = 20	3 + 9 = [12]	1 + 9 = [10]
9 + 12 = [21]	8 + [9] = 17	10 - 9 = [1]	9 - 0 = [9]
4 + 9 = [13]	[9] + 9 = 18	9 + [12] = 21	[9] + 1 = 10
[9] + 0 = 9	9 + 11 = [20]	9 + 8 = [17]	7 + 9 = [16]
[9] + 5 = 14	9 + 9 = [18]	[9] + 3 = 12	9 + [1] = 10
1 + [9] = 10	11 + 9 = [20]	[9] + 11 = 20	9 + 9 = [18]
9 - 2 = [7]	[4] + 9 = 13	9 + [9] = 18	[8] + 9 = 17
8 + 9 = [17]	9 - 7 = [2]	9 - 9 = [0]	11 + [9] = 20
9 - 6 = [3]	10 + 9 = [19]	2 + 9 = [11]	1 + 9 = [10]
5 + 9 = [14]	9 - 5 = [4]	6 + 9 = [15]	11 - 2 = [9]

Number Correct _____ Number of Errors _____

Lesson 7 Work Sheet

Answers are shown in bold below for students to mark their work.

1.

a) Start at 7 and add 3 five times

7 **10** **13** **16** **19** **22** 25

b) Start at 9 and add 4 five times

9 **13** **17** **21** **25** **29** 33

c) Start at 8 and add 5 five times

8 **13** **18** **23** **28** **33** 38

d) Start at 6 and add 2 five times

6 **8** **10** **12** **14** **16** 18

Number Correct: _____

2. Choose numbers from the box to complete the addition number sentences.

2	5	7	10	11	15

9	+	2	=	**11**	6	+	9	=	**15**	**5**	+	9	=	14
9	+	**7**	=	16	**2**	+	9	=	11	9	+	**10**	=	19

Number Correct: _____

3. Use the numbers 1 to 10 to fill the empty cells so that the sum of each horizontal block of cells equals the clue number on its left, and the sum of each vertical block the number on top. Each number can only be used once per block. The first one has been done for you.

	12	5
7	3	4
10	9	1

	14	11
6	**4**	**2**
19	**10**	9

	13	13
19	**10**	9
7	**3**	**4**

Number Correct: _____

Lesson 7: Four Minute Addition Frenzy

Students write the sum of the column and row numbers in each space for 4 minutes.
Answers provided in squares below for students to mark their work.

+	**9**	**3**	**10**	**4**	**1**	**2**	**0**
3	12	6	13	7	4	5	3
8	17	11	18	12	9	10	8
0	9	3	10	4	1	2	0
2	11	5	12	6	3	4	2
9	18	12	19	13	10	11	9
6	15	9	16	10	7	8	6
5	14	8	15	9	6	7	5

Number Correct: _____

+	**10**	**7**	**9**	**4**	**1**	**9**	**11**
2	12	9	11	6	3	11	13
9	19	16	18	13	10	18	20
3	13	10	12	7	4	12	14
10	20	17	19	14	11	19	21
4	14	11	13	8	5	13	15
1	11	8	10	5	2	10	12
0	10	7	9	4	1	9	11

Number Correct: _____

Lesson 7 Bingo

Students choose and write 9 of the answer numbers (from the list of 15 answers given in their workbooks) in the squares within their 3x3 grid. Their grid should have all squares filled with 9 different numbers from the list of answers.

Read out the questions in random order from the list of questions on the right without the answers (which are shown in brackets).

Students cross off the numbers in their grid if the number answers the question. The students call out “Bingo” if they have 3 answers crossed out in a row (down, across or diagonally in the grid). First student to call out Bingo wins. You should check that the student does have Bingo. For a longer game, all the squares in the grid could be required to be crossed off to win.

Questions (+9):

0 + 9 [9]
3 + 9 [12]
9 + 10 [19]
9 + 2 [11]
9 + 5 [14]
11 + 9 [20]
15 + 9 [24]
4 + 9 [13]
6 + 9 [15]
20 + 9 [29]
9 + 7 [16]
9 + 9 [18]
12 + 9 [21]
1 + 9 [10]
8 + 9 [17]

Lesson 8: + 5

Addition and Subtraction Facts + 5 and – 5 Students fill in the highlighted ones below			
0 + 5 = 5	5 + 0 = 5	5 – 5 = 0	5 – 0 = 5
1 + 5 = 6	5 + 1 = 6	6 – 5 = 1	6 – 1 = 5
2 + 5 = 7	5 + 2 = 7	7 – 5 = 2	7 – 2 = 5
3 + 5 = 8	5 + 3 = 8	8 – 5 = 3	8 – 3 = 5
4 + 5 = 9	5 + 4 = 9	9 – 5 = 4	9 – 5 = 5
5 + 5 = 10	5 + 5 = 10	10 – 5 = 5	10 – 5 = 5
6 + 5 = 11	5 + 6 = 11	11 – 5 = 6	11 – 6 = 5
7 + 5 = 12	5 + 7 = 12	12 – 5 = 7	12 – 7 = 5
8 + 5 = 13	5 + 8 = 13	13 – 5 = 8	13 – 8 = 5
9 + 5 = 14	5 + 9 = 14	14 – 5 = 9	14 – 9 = 5
10 + 5 = 15	5 + 10 = 15	15 – 5 = 10	15 – 10 = 5
11 + 5 = 16	5 + 11 = 16	16 – 5 = 11	16 – 11 = 5
12 + 5 = 17	5 + 12 = 17	17 – 5 = 12	17 – 12 = 5

Lesson 8 Intention & Language

Lesson Intention

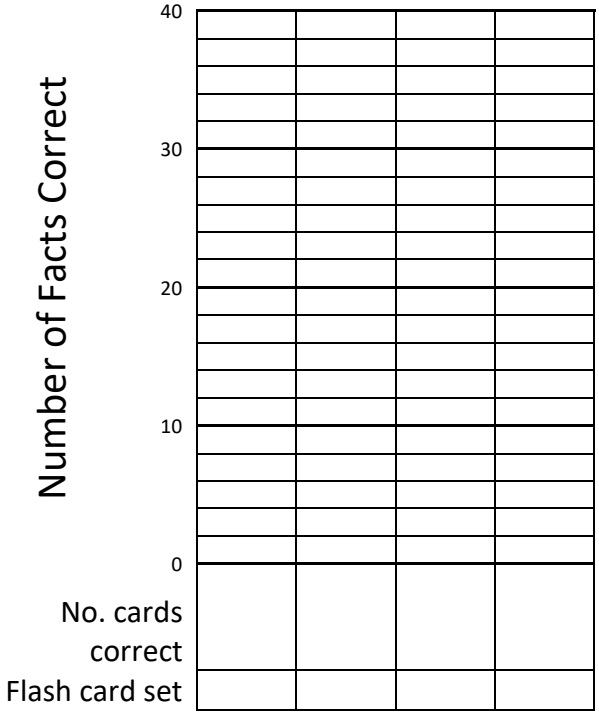
In these Intervention Mathematics lessons, we are looking at the number facts up to 12. Today our focus is on is adding 5, 6 and 9. In our earlier lesson today we looked at adding 9. In this lesson our focus is adding 5. While students may know these number facts, can they do the questions fast and get the right answers?

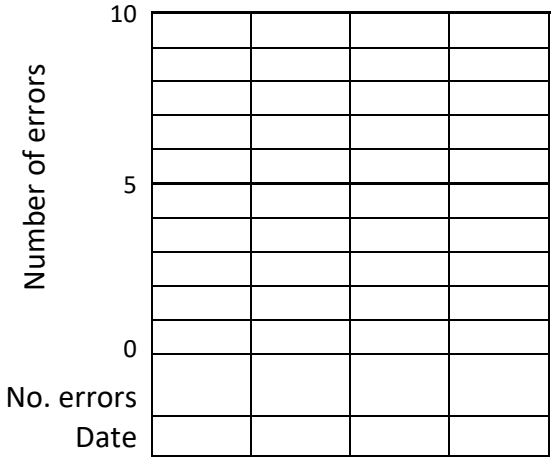
Lesson Language

Another, extra, additional.

Lesson 8 Flash Cards Graph

Students work in groups of 2 or 3 and time each other as they answer as many flash cards as they can in one minute. Flash cards are placed in two piles as answered, based on whether correct or incorrect. Students should graph the number of flash cards they had correct and incorrect for each attempt below (with enough space for up to four attempts).





Lesson 8 Speed Questions (+ & - 5)

Students answer as many as they can in 2 minutes, then read out answers (in []) for students to mark.

9 + [5] = 14	6 + 5 = [11]	5 + 5 = [10]	5 + [0] = 5
[5] + 5 = 10	5 - 5 = [0]	7 + 5 = [12]	5 + 4 = [9]
5 + 2 = [7]	[3] + 5 = 8	11 + 5 = [16]	[8] + 5 = 13
5 + [7] = 12	[10] + 5 = 15	5 - 5 = [0]	5 + 0 = [5]
5 - 3 = [2]	5 + [11] = 16	5 - 2 = [3]	5 + [10] = 15
5 + 3 = [8]	7 - 5 = [2]	5 + [0] = 5	5 - 5 = [0]
[6] + 5 = 11	9 + [5] = 14	5 + [5] = 10	5 - 1 = [4]
5 - 5 = [0]	5 + 5 = [10]	4 + 5 = [9]	2 + 5 = [7]
5 + 7 = [12]	9 + 5 = [14]	[1] + 5 = 6	12 + 5 = [17]
11 + 5 = [16]	5 + 2 = [7]	[5] + 5 = 10	[5] + 3 = 8

Number Correct _____ Number of Errors _____

Lesson 8 Work Sheet

Answers are shown in bold below for students to mark their work.

1.

a) Start at 2 and add 4 five times

2 **6** **10** **14** **18** **22** 26

b) Start at 11 and add 5 five times

11 **16** **21** **26** **31** **36** 41

c) Start at 8 and add 9 five times

8 **17** **26** **35** **44** **53**

d) Start at 9 and add 3 five times

9 **12** **15** **18** **21** **24** 27

Number Correct: _____

2. Fill in the squares so that the numbers in each row and column add up to the printed sums on the right and bottom.

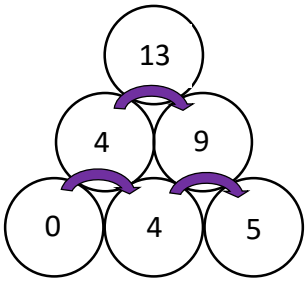
3	**2**	5
4	**6**	10
7	8	

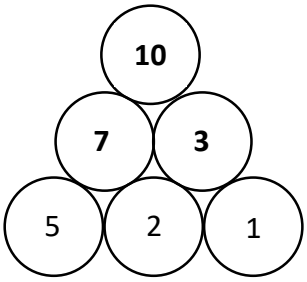
7	4	11
1	**4**	5
8	8	

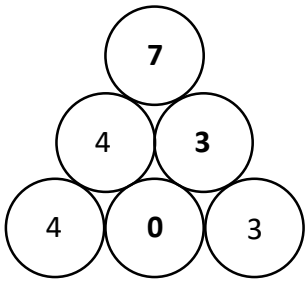
2	**9**	11
3	**3**	6
5	12	

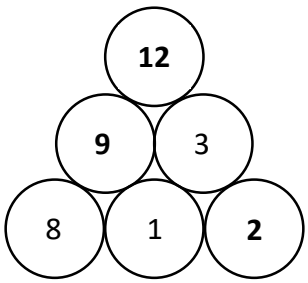
Number Correct: _____

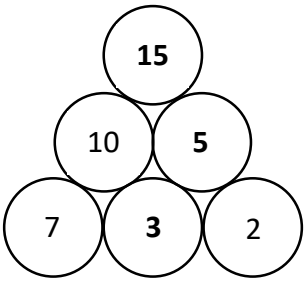
3. Fill in the empty circles with the sum of the 2 numbers next to each other in a row in the circle above the 2 numbers. The first one is done for you.

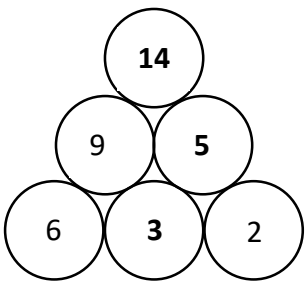












Number Correct: _____

Lesson 8: Four Minute Addition Frenzy

Students write the sum of the column and row numbers in each space for 4 minutes.
Answers provided in squares below for students to mark their work.

+	**5**	**10**	**4**	**9**	**1**	**3**	**0**	**2**
5	10	15	9	14	6	8	5	7
1	6	11	5	10	2	4	1	3
7	12	17	11	16	8	10	7	9
9	14	19	13	18	10	12	9	11
6	11	16	10	15	7	9	6	8
2	7	12	6	11	3	5	2	4
0	5	10	4	9	1	3	0	2
10	15	20	14	19	11	13	10	12

Number Correct: _____

+	**10**	**8**	**9**	**4**	**5**	**3**	**4**	**11**
5	15	13	14	9	10	8	9	16
1	11	9	10	5	6	4	5	12
9	19	17	18	13	14	12	13	20
4	14	12	13	8	9	7	8	15
10	20	18	19	14	15	13	14	21
2	12	10	11	6	7	5	6	13
3	13	11	12	7	8	6	7	14
0	10	8	9	4	5	3	4	11

Number Correct: _____

Lesson 8 Bingo

Students choose and write 9 of the answer numbers (from the list of 15 answers given in their workbooks) in the squares within their 3x3 grid. Their grid should have all squares filled with 9 different numbers from the list of answers.

Read out the questions in random order from the list of questions on the right without the answers (which are shown in brackets).

Students cross off the numbers in their grid if the number answers the question. The students call out “Bingo” if they have 3 answers crossed out in a row (down, across or diagonally in the grid). First student to call out Bingo wins. You should check that the student does have Bingo. For a longer game, all the squares in the grid could be required to be crossed off to win.

Questions (+5):

10 + 5 [15]
5 + 1 [6]
3 + 5 [9]
5 + 0 [5]
12 + 5 [17]
15 + 5 [20]
6 + 5 [11]
20 + 5 [25]
8 + 5 [13]
2 + 5 [7]
9 + 5 [14]
5 + 5 [10]
14 + 5 [19]
5 + 3 [8]
7 + 5 [12]

Lesson 9: + 6

Addition and Subtraction Facts + 6 and – 6 Students fill in the highlighted ones below			
0 + 6 = 6	6 + 0 = 6	6 – 6 = 0	6 – 0 = 6
1 + 6 = 7	6 + 1 = 7	7 – 6 = 1	7 – 1 = 6
2 + 6 = 8	6 + 2 = 8	8 – 6 = 2	8 – 2 = 6
3 + 6 = 9	6 + 3 = 9	9 – 6 = 3	9 – 3 = 6
4 + 6 = 10	6 + 4 = 10	10 – 6 = 4	10 – 4 = 6
5 + 6 = 11	6 + 5 = 11	11 – 6 = 5	11 – 5 = 6
6 + 6 = 12	6 + 6 = 12	12 – 6 = 6	12 – 6 = 6
7 + 6 = 13	6 + 7 = 13	13 – 6 = 7	13 – 7 = 6
8 + 6 = 14	6 + 8 = 14	14 – 6 = 8	14 – 8 = 6
9 + 6 = 15	6 + 9 = 15	15 – 6 = 9	15 – 9 = 6
10 + 6 = 16	6 + 10 = 16	16 – 6 = 10	16 – 10 = 6
11 + 6 = 17	6 + 11 = 17	17 – 6 = 11	17 – 11 = 6
12 + 6 = 18	6 + 12 = 18	18 – 6 = 12	18 – 12 = 6

Lesson 9 Intention & Language

Lesson Intention

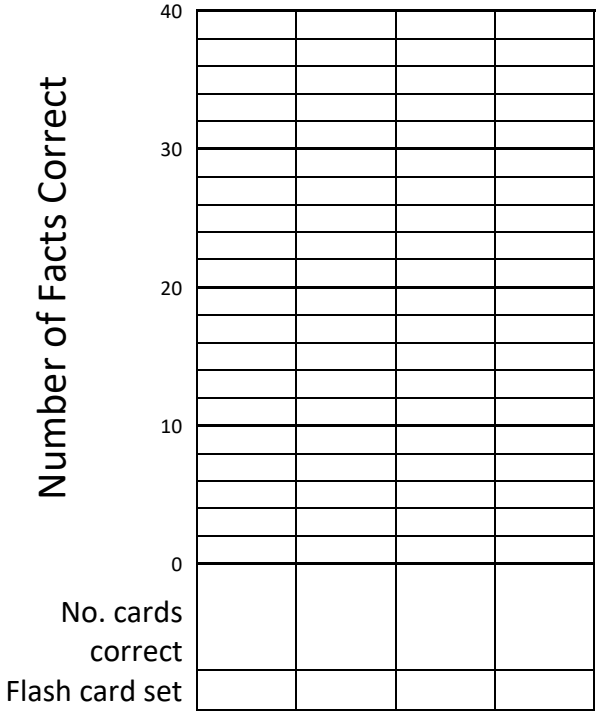
In these Intervention Mathematics lessons, we are looking at the number facts up to 12. Today our focus is on is adding 5, 6 and 9. In our earlier lessons today we looked at adding 5 and 9. In this lesson our focus is adding 6. While students may know these number facts, can they do the questions fast and get the right answers?

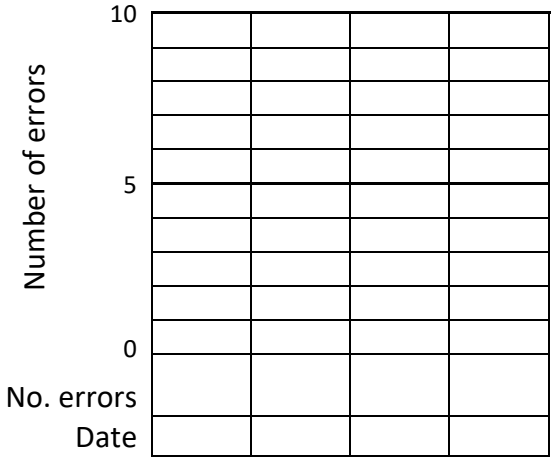
Lesson Language

Compute, calculate, work out.

Lesson 9 Flash Cards Graph

Students work in groups of 2 or 3 and time each other as they answer as many flash cards as they can in one minute. Flash cards are placed in two piles as answered, based on whether correct or incorrect. Students should graph the number of flash cards they had correct and incorrect for each attempt below (with enough space for up to four attempts).





Lesson 9 Speed Questions (+ & - 6)

Students answer as many as they can in 2 minutes, then read out answers (in []) for students to mark.

6 + 0 = [6]	12 + 6 = [18]	6 + 10 = [16]	5 + 6 = [11]
7 + [6] = 13	9 + 6 = [15]	6 + 1 = [7]	6 + [1] = 7
[10] + 6 = 16	6 + 2 = [8]	6 + 11 = [17]	4 + [6] = 10
2 + 6 = [8]	8 + 6 = [14]	0 + [6] = 6	6 + 3 = [9]
6 + 5 = [11]	12 + [6] = 18	6 + [6] = 12	6 - 3 = [3]
7 - 6 = [1]	6 + [1] = 7	6 - 1 = [5]	6 - 6 = [0]
6 - 1 = [5]	[6] + 11 = 17	6 + 5 = [11]	2 + 6 = [8]
6 + [10] = 16	[5] + 6 = 11	6 - 2 = [4]	[5] + 6 = 11
11 + 6 = [17]	6 - 4 = [2]	[7] + 6 = 13	[2] + 6 = 8
[3] + 6 = 9	6 - 2 = [4]	[6] + 10 = 16	7 + 6 = [13]

Number Correct _____ Number of Errors _____

Lesson 9 Work Sheet

Answers are shown in bold below for students to mark their work.

1.

a) Start at 18 and add 5 five times

18 **23 28 33 38 43**

b) Start at 15 and add 9 five times

18 **27 36 45 54 63**

c. Start at 123 and add 6 five times

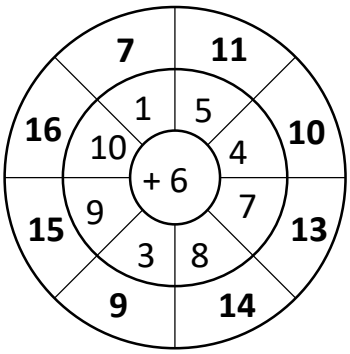
123 **129 135 144 153 162**

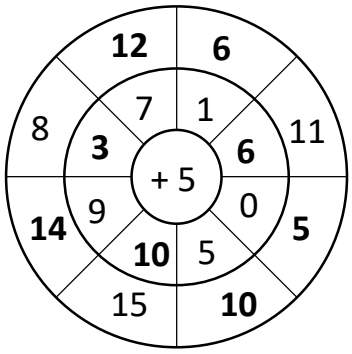
d. Start at 22 and add 10 five times

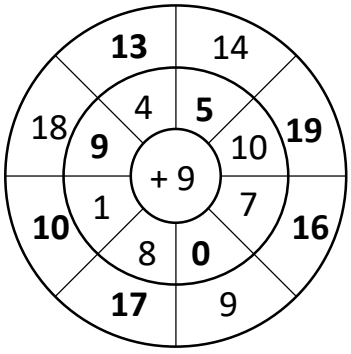
22 **32 42 52 62 72**

Number Correct: _____

2. Add the number to the middle number and write your answer in the space.







Number Correct: _____

3. Apply the rule to the input number to make the output number.

Input	Rule	Output
10	+6	**16**
5	+6	**11**
4	+6	10
2	+6	**8**
3	+6	9

Input	Rule	Output
2	+5	**7**
4	+5	9
9	+9	**18**
1	+9	10
5	+9	14

Number Correct: _____

Lesson 9: Four Minute Addition Frenzy

Students write the sum of the column and row numbers in each space for 4 minutes.
Answers provided in squares below for students to mark their work.

+	6	0	2	10	4	9	5	3
5	11	5	7	15	9	14	10	8
3	9	3	5	13	7	12	8	6
6	12	6	8	16	10	15	11	9
1	7	1	3	11	5	10	6	4
5	11	5	7	15	9	14	10	8
2	8	2	4	12	6	11	7	5
4	10	4	6	14	8	13	9	7
6	12	6	8	16	10	15	11	9

Number Correct: _____

+	9	10	6	7	9	8	0	11
6	15	16	12	13	15	14	6	17
1	10	11	7	8	10	9	1	12
9	18	19	15	16	18	17	9	20
2	11	12	8	9	11	10	2	13
10	19	20	16	17	19	18	10	21
5	14	15	11	12	14	13	5	16
3	12	13	9	10	12	11	3	14
4	13	14	10	11	13	12	4	15

Number Correct: _____

Lesson 9 Reflection & Metacognition

Students answer the questions below.

What did you learn today?

_____

_____

_____

What were your improvements today?

_____

_____

_____

How confident do you feel about today's focus topic of adding 5, 6 and 9 after today's lessons? Circle one below:

I am not sure/confused about this topic

I have some questions about this topic

I think I can do this topic

I am sure I can do this topic

Lesson 10: + 7

Addition and Subtraction Facts + 7 and – 7 Students fill in the highlighted ones below			
0 + 7 = 7	7 + 0 = 7	7 – 7 = 0	7 – 0 = 7
1 + 7 = 8	7 + 1 = 8	8 – 7 = 1	8 – 1 = 7
2 + 7 = 9	7 + 2 = 9	9 – 7 = 2	9 – 2 = 7
3 + 7 = 10	7 + 3 = 10	10 – 7 = 3	10 – 3 = 7
4 + 7 = 11	7 + 4 = 11	11 – 7 = 4	11 – 4 = 7
5 + 7 = 12	7 + 5 = 12	12 – 7 = 5	12 – 5 = 7
6 + 7 = 13	7 + 6 = 13	13 – 7 = 6	13 – 6 = 7
7 + 7 = 14	7 + 7 = 14	14 – 7 = 7	14 – 7 = 7
8 + 7 = 15	7 + 8 = 15	15 – 7 = 8	15 – 8 = 7
9 + 7 = 16	7 + 9 = 16	16 – 7 = 9	16 – 9 = 7
10 + 7 = 17	7 + 10 = 17	17 – 7 = 10	17 – 10 = 7
11 + 7 = 18	7 + 11 = 18	18 – 7 = 11	18 – 11 = 7
12 + 7 = 19	7 + 12 = 19	19 – 7 = 12	19 – 12 = 7

Lesson 10 Intention & Language

Lesson Intention

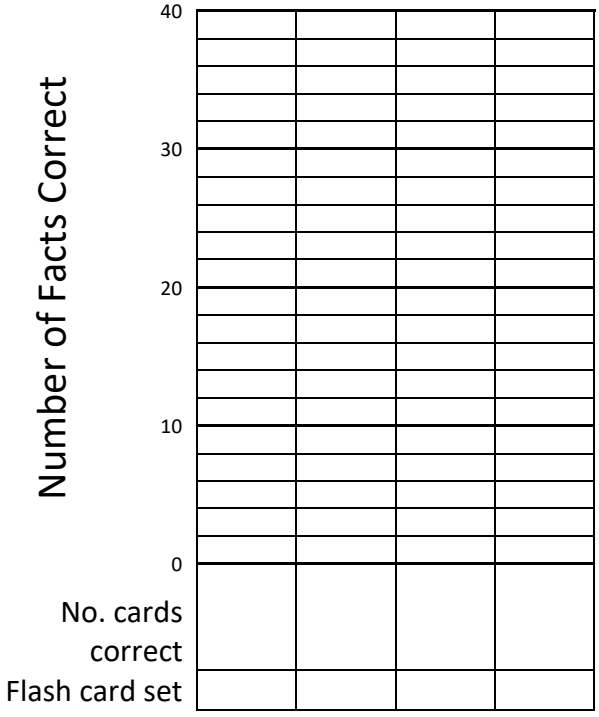
In these Intervention Mathematics lessons, we are looking at the number facts up to 12. Today our focus is on is adding 7, 8 and 12. In this lesson our focus is adding 7. While students may know these number facts, can they do the questions fast and get the right answers?

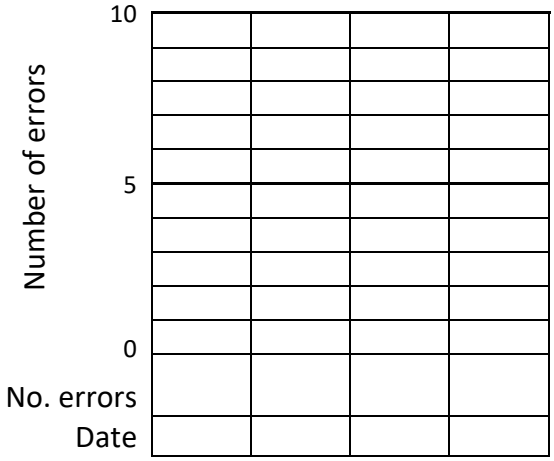
Lesson Language

In total, all up, grand total.

Lesson 10 Flash Cards Graph

Students work in groups of 2 or 3 and time each other as they answer as many flash cards as they can in one minute. Flash cards are placed in two piles as answered, based on whether correct or incorrect. Students should graph the number of flash cards they had correct and incorrect for each attempt below (with enough space for up to four attempts).





Lesson 10 Speed Questions (+ & - 7)

Students answer as many as they can in 2 minutes, then read out answers (in []) for students to mark.

7 + 8 = [15]	7 + 3 = [10]	3 + 7 = [10]	7 + 4 = [11]
5 + 7 = [12]	7 + 12 = [19]	7 + 6 = [13]	7 + [11] = 18
7 + 2 = [9]	[10] + 7 = 17	[7] + 11 = 18	7 + 9 = [16]
9 + 7 = [16]	7 - 3 = [4]	[7] + 7 = 14	10 + 7 = [17]
[5] + 7 = 12	2 + [7] = 9	5 + [7] = 12	7 + [7] = 14
7 - 4 = [3]	8 + [7] = 15	7 + 8 = [15]	10 - 7 = [3]
5 + [7] = 12	4 + 7 = [11]	12 + 7 = [19]	7 - 0 = [7]
11 - 7 = [4]	7 + 4 = [11]	7 - 4 = [3]	[1] + 7 = 8
[7] + 4 = 11	[7] + 11 = 18	10 - 7 = [3]	[11] + 7 = 18
7 + [7] = 14	7 - 6 = [1]	11 + [7] = 18	7 + 10 = [17]

Number Correct _____ Number of Errors _____

Lesson 10 Work Sheet

Answers are shown in bold below for students to mark their work.

1.

a. Start at 45 and add 100 five times

45 **145 245 345 445 545**

b. Start at 415 and add 100 five times

415 **515 615 715 815 915**

c. Start at 38 and add 20 five times

38 **58 78 98 118 138**

d. Start at 158 and add 60 five times

158 **218 278 338 398 458**

Number Correct: _____

2. Use the numbers 1 to 10 to fill the empty cells so that the sum of each horizontal block of cells equals the clue number on its left, and the sum of each vertical block the number on top. Each number can only be used once per block.

	10	8
9	**4**	**5**
9	6	**3**

	15	10
14	**10**	**4**
11	**5**	6

	15	13
14	6	**8**
14	**9**	**5**

Number Correct: _____

2. Place the numbers 1 to 9 in the 3 by 3 grid so that each horizontal and vertical line adds up to the given sum. You can only use each number once. Some numbers are already placed for you.

4	5	**1**	10
6	3	**8**	17
7	**9**	2	18
17	17	11	

5	**3**	**8**	16
7	6	**1**	14
4	**2**	9	15
16	11	18	

1	**7**	**5**	13
9	**2**	4	15
3	**8**	6	17
13	17	15	

Number Correct: _____

Lesson 10: Four Minute Addition Frenzy

Students write the sum of the column and row numbers in each space for 4 minutes.
Answers provided in squares below for students to mark their work.

+	**0**	**5**	**4**	**9**	**2**	**10**	**3**	**7**
7	7	12	11	16	9	17	10	14
2	2	7	6	11	4	12	5	9
10	10	15	14	19	12	20	13	17
4	4	9	8	13	6	14	7	11
6	6	11	10	15	8	16	9	13
3	3	8	7	12	5	13	6	10
8	8	13	12	17	10	18	11	15
9	9	14	13	18	11	19	12	16

Number Correct: _____

+	**7**	**0**	**6**	**9**	**5**	**1**	**7**	**4**
6	13	6	12	15	11	7	13	10
5	12	5	11	14	10	6	12	9
4	11	4	10	13	9	5	11	8
11	18	11	17	20	16	12	18	15
3	10	3	9	12	8	4	10	7
7	14	7	13	16	12	8	14	11
10	17	10	16	19	15	11	17	14
2	9	2	8	11	7	3	9	6

Number Correct: _____

Lesson 10 Bingo

Students choose and write 9 of the answer numbers (from the list of 15 answers given in their workbooks) in the squares within their 3x3 grid. Their grid should have all squares filled with 9 different numbers from the list of answers.

Read out the questions in random order from the list of questions on the right without the answers (which are shown in brackets).

Students cross off the numbers in their grid if the number answers the question. The students call out "Bingo" if they have 3 answers crossed out in a row (down, across or diagonally in the grid). First student to call out Bingo wins. You should check that the student does have Bingo. For a longer game, all the squares in the grid could be required to be crossed off to win.

Questions (+7):

9 + 7 [16]
7 + 1 [8]
8 + 7 [15]
7 + 6 [13]
7 + 4 [11]
3 + 7 [10]
11 + 7 [17]
14 + 7 [21]
7 + 0 [7]
12 + 7 [19]
10 + 7 [17]
5 + 7 [12]
7 + 7 [14]
7 + 2 [9]
20 + 7 [27]

Lesson 11: + 8

Addition and Subtraction Facts + 8 and – 8 Students fill in the highlighted ones below			
0 + 8 = 8	8 + 0 = 8	8 – 8 = 0	8 – 0 = 8
1 + 8 = 9	8 + 1 = 9	9 – 8 = 1	9 – 1 = 8
2 + 8 = 10	8 + 2 = 10	10 – 8 = 2	10 – 2 = 8
3 + 8 = 11	8 + 3 = 11	11 – 8 = 3	11 – 3 = 8
4 + 8 = 12	8 + 4 = 12	12 – 8 = 4	12 – 4 = 8
5 + 8 = 13	8 + 5 = 13	13 – 8 = 5	13 – 5 = 8
6 + 8 = 14	8 + 6 = 14	14 – 8 = 6	14 – 6 = 8
7 + 8 = 15	8 + 7 = 15	15 – 8 = 7	15 – 7 = 8
8 + 8 = 16	8 + 8 = 16	16 – 8 = 8	16 – 8 = 8
9 + 8 = 17	8 + 9 = 17	17 – 8 = 9	17 – 9 = 8
10 + 8 = 18	8 + 10 = 18	18 – 8 = 10	18 – 10 = 8
11 + 8 = 19	8 + 11 = 19	19 – 8 = 11	19 – 11 = 8
12 + 8 = 20	8 + 12 = 20	20 – 8 = 12	20 – 12 = 8

Lesson 11 Intention & Language

Lesson Intention

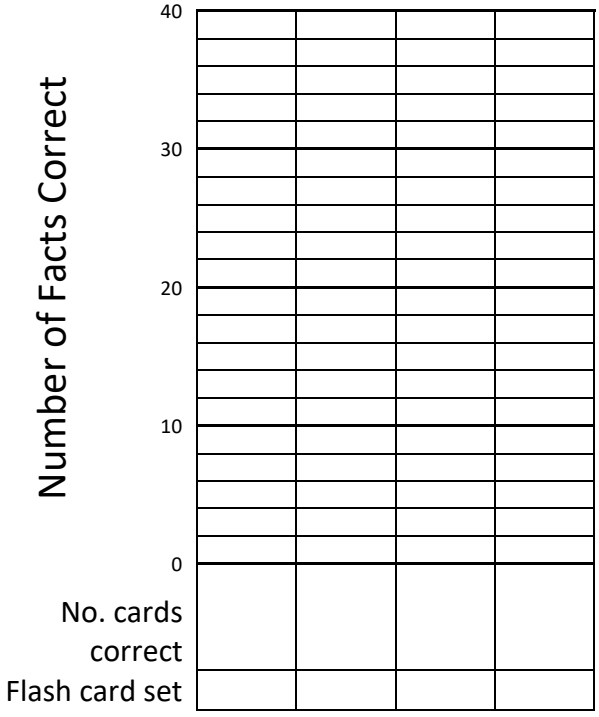
In these Intervention Mathematics lessons, we are looking at the number facts up to 12. Today our focus is on is adding 7, 8 and 12. In our earlier lesson today we looked at adding 7. In this lesson our focus is adding 8. While students may know these number facts, can they do the questions fast and get the right answers?

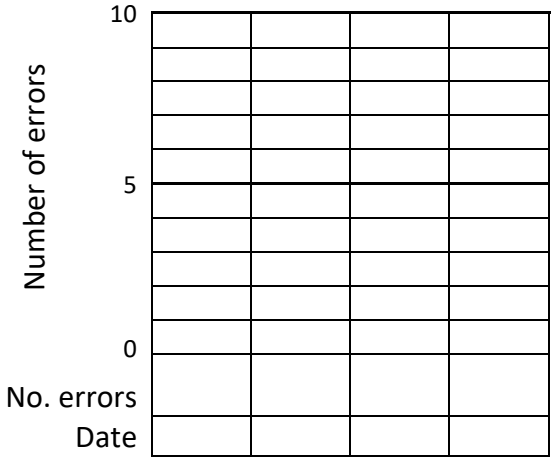
Lesson Language

Amount, quantity, how much.

Lesson 11 Flash Cards Graph

Students work in groups of 2 or 3 and time each other as they answer as many flash cards as they can in one minute. Flash cards are placed in two piles as answered, based on whether correct or incorrect. Students should graph the number of flash cards they had correct and incorrect for each attempt below (with enough space for up to four attempts).





Lesson 11 Speed Questions (+ & - 8)

Students answer as many as they can in 2 minutes, then read out answers (in []) for students to mark.

4 + 8 = [12]	8 + 0 = [8]	8 + 5 = [13]	8 + 12 = [20]
8 + 11 = [19]	[8] + 9 = 17	8 - 4 = [4]	7 + 8 = [15]
[8] + 9 = 17	4 + 8 = [12]	8 + 4 = [12]	8 + [8] = 0
[8] + 7 = 15	11 + 8 = [19]	9 + [8] = 17	2 + 8 = [10]
10 + [8] = 18	8 - 4 = [4]	8 + [3] = 11	8 - 0 = [8]
8 + [2] = 10	12 + [8] = 20	8 + 12 = [20]	[9] + 8 = 17
1 + 8 = [9]	8 + [7] = 15	[1] + 8 = 9	[4] + 8 = 12
8 - 2 = [6]	8 - 3 = [5]	10 + 8 = [18]	1 + [8] = 9
8 - 6 = [2]	6 + 8 = [14]	8 - 8 = [0]	8 + 3 = [11]
8 + 7 = [15]	[10] + 8 = 18	[11] + 8 = 19	8 - 7 = [1]

Number Correct _____ Number of Errors _____

Lesson 11 Work Sheet

Answers are shown in bold below for students to mark their work.

1.

a. Start at 145 and add 30 five times

145 **175 205 235 265 295**

b. Start at 158 and add 60 five times

158 **218 278 338 398 458**

c. Start at 198 and add 40 five times

198 **238 278 318 358 398**

d. Start at 845 and add 50 five times

845 **895 945 995 1045 1095**

Number Correct: _____

2. Fill in the squares so that the numbers in each row and column add up to the printed sums on the right and bottom

1	7	**6**	14
5	2	8	15
9	**3**	**4**	16
15	12	18	

1	5	4	10
8	**9**	**7**	24
2	6	**3**	11
11	20	14	

1	6	**4**	11
9	5	7	21
3	**8**	**3**	14
13	19	14	

Number Correct: _____

3. Use the digits 0 to 9 to fill the cells in the grid. The columns must add up to the given sums at the bottom. You must use all the digits 0 to 9 in each row, but digits may be repeated in columns. The digits in connecting unshaded cells (also diagonally) must be different.

a)

9	**6**	1	5	**0**	4	7	8	**2**	**3**
7	2	3	8	**1**	**0**	6	5	**9**	4
16	8	4	13	1	4	13	13	11	7

b)

3	**0**	8	1	**6**	**4**	**5**	9	7	2
6	**1**	7	4	2	**0**	**8**	5	9	3
9	1	15	5	8	4	13	14	16	5

Number Correct: _____

Lesson 11: Four Minute Addition Frenzy

Students write the sum of the column and row numbers in each space for 4 minutes.
Answers provided in squares below for students to mark their work.

+	**6**	**10**	**1**	**4**	**5**	**2**	**0**	**7**
8	14	18	9	12	13	10	8	15
10	16	20	11	14	15	12	10	17
3	9	13	4	7	8	5	3	10
4	10	14	5	8	9	6	4	11
9	15	19	10	13	14	11	9	16
7	13	17	8	11	12	9	7	14
2	8	12	3	6	7	4	2	9
6	12	16	7	10	11	8	6	13

Number Correct: _____

+	**8**	**2**	**0**	**7**	**6**	**5**	**9**	**1**
9	17	11	9	16	15	14	18	10
3	11	5	3	10	9	8	12	4
8	16	10	8	15	14	13	17	9
7	15	9	7	14	13	12	16	8
3	11	5	3	10	9	8	12	4
4	12	6	4	11	10	9	13	5
11	19	13	11	18	17	16	20	12
5	13	7	5	12	11	10	14	6

Number Correct: _____

Lesson 11 Bingo

Students choose and write 9 of the answer numbers (from the list of 15 answers given in their workbooks) in the squares within their 3x3 grid. Their grid should have all squares filled with 9 different numbers from the list of answers.

Read out the questions in random order from the list of questions on the right without the answers (which are shown in brackets).

Students cross off the numbers in their grid if the number answers the question. The students call out “Bingo” if they have 3 answers crossed out in a row (down, across or diagonally in the grid). First student to call out Bingo wins. You should check that the student does have Bingo. For a longer game, all the squares in the grid could be required to be crossed off to win.

Questions (+8):

4 + 8 [12]
8 + 1 [9]
16 + 8 [24]
9 + 8 [17]
8 + 0 [8]
6 + 8 [14]
11 + 8 [19]
2 + 8 [10]
10 + 8 [18]
7 + 8 [15]
20 + 8 [28]
3 + 8 [11]
8 + 12 [20]
5 + 8 [13]
8 + 8 [16]

Lesson 12: + 12

Addition and Subtraction Facts + 12 and – 12 Students fill in the highlighted ones below			
0 + 12 = 12	12 + 0 = 12	12 – 12 = 0	12 – 0 = 12
1 + 12 = 13	12 + 1 = 13	13 – 12 = 1	13 – 1 = 12
2 + 12 = 14	12 + 2 = 14	14 – 12 = 2	14 – 2 = 12
3 + 12 = 15	12 + 3 = 15	15 – 12 = 3	15 – 3 = 12
4 + 12 = 16	12 + 4 = 16	16 – 12 = 4	16 – 4 = 12
5 + 12 = 17	12 + 5 = 17	17 – 12 = 5	17 – 5 = 12
6 + 12 = 18	12 + 6 = 18	18 – 12 = 6	18 – 6 = 12
7 + 12 = 19	12 + 7 = 19	19 – 12 = 7	19 – 7 = 12
8 + 12 = 20	12 + 8 = 20	20 – 12 = 8	20 – 8 = 12
9 + 12 = 21	12 + 9 = 21	21 – 12 = 9	21 – 9 = 12
10 + 12 = 22	12 + 10 = 22	22 – 12 = 10	22 – 10 = 12
11 + 12 = 23	12 + 11 = 23	23 – 12 = 11	23 – 11 = 12
12 + 12 = 24	12 + 12 = 24	24 – 12 = 12	24 – 12 = 12

Lesson 12 Intention & Language

Lesson Intention

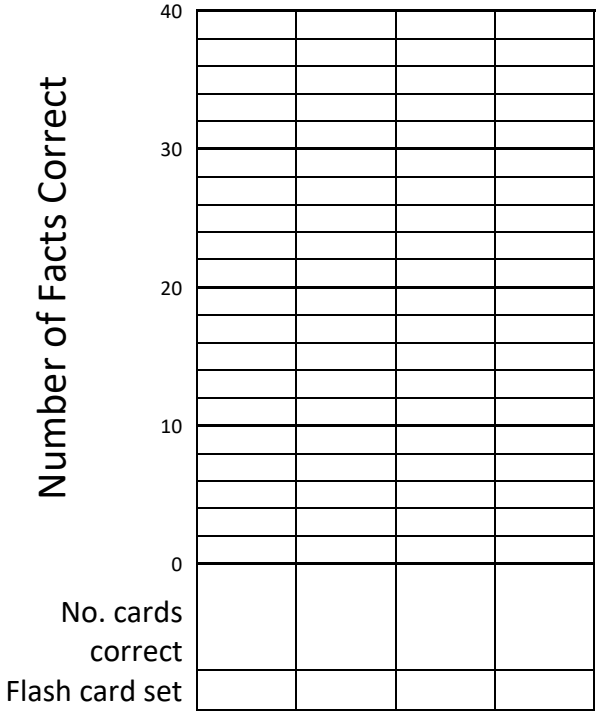
In these Intervention Mathematics lessons, we are looking at the number facts up to 12. Today our focus is on is adding 7, 8 and 12. In our earlier lessons today we looked at adding 7 and 8. In this lesson our focus is adding 12. While students may know these number facts, can they do the questions fast and get the right answers?

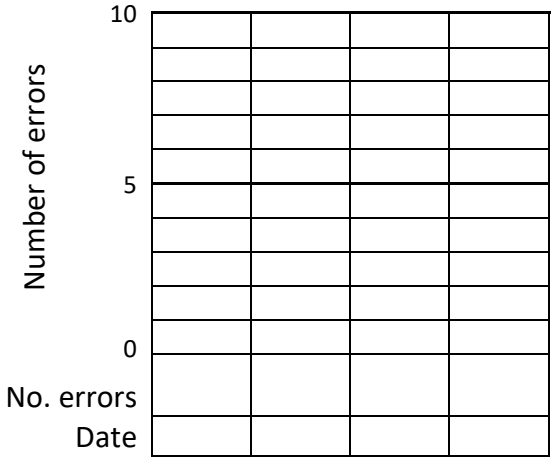
Lesson Language

How many, add up, count up.

Lesson 12 Flash Cards Graph

Students work in groups of 2 or 3 and time each other as they answer as many flash cards as they can in one minute. Flash cards are placed in two piles as answered, based on whether correct or incorrect. Students should graph the number of flash cards they had correct and incorrect for each attempt below (with enough space for up to four attempts).





Lesson 12 Speed Questions (+ & - 12)

Students answer as many as they can in 2 minutes, then read out answers (in []) for students to mark.

12 + 4 = [16]	12 + 5 = [17]	12 + 3 = [15]	11 + 12 = [23]
8 + 12 = [20]	0 + 12 = [12]	12 - 2 = [10]	12 + 7 = [19]
12 - 10 = [2]	12 + [6] = 18	[9] + 12 = 21	12 + [8] = 20
1 + 12 = [13]	12 - 0 = [12]	[12] + 7 = 19	12 - 9 = [3]
[12] + 10 = 22	[2] + 12 = 14	12 + [12] = 24	[4] + 12 = 16
12 - 8 = [4]	12 + 10 = [22]	12 + 7 = [19]	9 + 12 = [21]
12 + [2] = 14	[12] + 11 = 23	2 + 12 = [14]	12 - 12 = [0]
[12] + 11 = 23	12 - 1 = [11]	12 + [11] = 23	[12] + 2 = 14
3 + [12] = 15	12 + 12 = [24]	12 - 4 = [8]	3 + 12 = [15]
12 + 11 = [23]	3 + [12] = 15	6 + 12 = [18]	4 + [12] = 16

Number Correct _____ Number of Errors _____

Lesson 12 Work Sheet

Answers are shown in bold below for students to mark their work.

1. If the '4' became a '2'; how much bigger would the new number be?

a) 641 **20**

b) 475 **200**

c) 1324 **2**

d) 4295 **2000**

e) 6040 **20**

f) 6427 **200**

Number Correct: _____

2. Choose numbers from the box to complete the addition number sentences.

5	6	7	10	12	18

9	+	3	=	**12**	6	+	12	=	**18**	**5**	+	12	=	17
12	+	**7**	=	19	**6**	+	6	=	12	12	+	**10**	=	22

Number Correct: _____

3. Use the digits 0 to 9 to fill the cells in the grid. The columns must add up to the given sums at the bottom. You must use all the digits 0 to 9 in each row, but digits may be repeated in columns. The digits in connecting unshaded cells (also diagonally) must be different.

a)

1	3	5	**2**	**9**	**6**	7	4	**8**	0
6	**2**	**7**	4	8	**0**	**9**	5	1	**3**
7	5	12	6	17	6	16	9	9	3

b)

5	4	**6**	1	**3**	2	9	**0**	**8**	**7**
8	2	**9**	4	7	**6**	5	**1**	**3**	0
13	6	15	5	10	8	14	1	11	7

Number Correct: _____

Lesson 12: Four Minute Addition Frenzy

Students write the sum of the column and row numbers in each space for 4 minutes.
Answers provided in squares below for students to mark their work.

+	6	12	1	4	5	2	0	7
7	13	19	8	11	12	9	7	14
2	8	14	3	6	7	4	2	9
6	12	18	7	10	11	8	6	13
4	10	16	5	8	9	6	4	11
9	15	21	10	13	14	11	9	16
8	14	20	9	12	13	10	8	15
10	16	22	11	14	15	12	10	17
3	9	15	4	7	8	5	3	10

Number Correct: _____

+	6	5	9	11	8	2	0	7
9	15	14	18	20	17	11	9	16
11	17	16	20	22	19	13	11	18
8	14	13	17	19	16	10	8	15
7	13	12	16	18	15	9	7	14
3	9	8	12	14	11	5	3	10
4	10	9	13	15	12	6	4	11
12	18	17	21	23	20	14	12	19
5	11	10	14	16	13	7	5	12

Number Correct: _____

Lesson 12 Reflection & Metacognition

Students answer the questions below.

What did you learn today?

_____

_____

_____

What were your improvements today?

_____

_____

_____

How confident do you feel about today's focus topic of adding 7, 8 and 12 after today's lessons? Circle one below:

I am not sure/confused about this topic

I have some questions about this topic

I think I can do this topic

I am sure I can do this topic

Lesson 13: All addition

Addition and Subtraction Facts + and – 0 to 12 Students fill in the highlighted ones below			
0 + 10 = 10	10 + 0 = 10	10 – 10 = 0	10 – 0 = 10
1 + 9 = 10	9 + 1 = 10	10 – 9 = 1	10 – 1 = 9
2 + 0 = 2	0 + 2 = 2	2 – 0 = 2	2 – 2 = 0
3 + 5 = 8	5 + 3 = 8	8 – 5 = 3	8 – 3 = 5
4 + 11 = 15	11 + 4 = 15	15 – 11 = 4	15 – 4 = 11
5 + 3 = 8	3 + 5 = 8	8 – 3 = 5	8 – 5 = 3
6 + 1 = 7	1 + 6 = 7	7 – 1 = 6	7 – 6 = 1
7 + 7 = 14	7 + 7 = 14	14 – 7 = 7	14 – 7 = 7
8 + 4 = 12	4 + 8 = 12	12 – 4 = 8	12 – 8 = 4
9 + 2 = 11	2 + 9 = 11	11 – 2 = 9	11 – 9 = 2
10 + 8 = 18	8 + 10 = 18	18 – 8 = 10	18 – 10 = 8
11 + 6 = 17	6 + 11 = 17	17 – 6 = 11	17 – 11 = 5
12 + 12 = 24	12 + 12 = 24	24 – 12 = 12	24 – 12 = 12

Lesson 13 Intention & Language

Lesson Intention

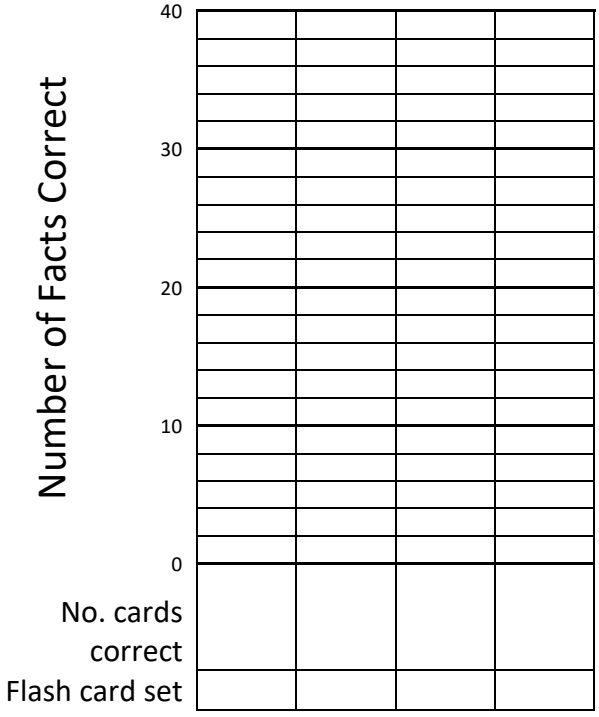
In these Intervention Mathematics lessons, we are looking at the number facts up to 12. Today our focus is on is adding numbers from 0 to 12, and subtracting 0, 1 and 2. In this lesson our focus is adding all the numbers from 0 to 12. While students may know these number facts, can they do the questions fast and get the right answers?

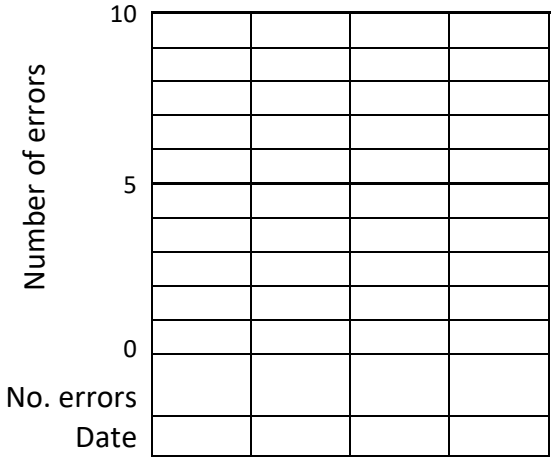
Lesson Language

Add, sum, plus, total, addition, increase.

Lesson 13 Flash Cards Graph

Students work in groups of 2 or 3 and time each other as they answer as many flash cards as they can in one minute. Flash cards are placed in two piles as answered, based on whether correct or incorrect. Students should graph the number of flash cards they had correct and incorrect for each attempt below (with enough space for up to four attempts).





Lesson 13 Speed Questions (All + & -)

Students answer as many as they can in 2 minutes, then read out answers (in []) for students to mark.

4 + 10 = [14]	10 + 8 = [18]	7 + 1 = [8]	10 + 3 = [13]
10 + 2 = [12]	4 + 7 = [11]	[9] + 1 = 10	7 - 4 = [3]
12 + 2 = [14]	1 + 8 = [9]	9 - 5 = [4]	8 + 12 = [20]
[7] + 4 = 11	8 + [11] = 19	11 + 11 = [22]	3 + 8 = [11]
8 - 2 = [6]	7 + [7] = 14	9 + 1 = [10]	11 + [3] = 14
1 + [8] = 9	12 - 3 = [9]	6 + 7 = [13]	[7] + 10 = 17
[3] + 1 = 4	7 - 4 = [3]	1 + [7] = 8	[12] + 3 = 15
10 - 7 = [3]	[5] + 3 = 8	2 + [4] = 6	11 - 5 = [6]
6 + 12 = [18]	3 + 10 = [13]	[2] + 11 = 13	10 + 9 = [19]
2 + [3] = 5	[9] + 2 = 11	11 - 8 = [3]	2 + [2] = 4

Number Correct _____ Number of Errors _____

Lesson 13 Work Sheet

Answers are shown in bold below for students to mark their work.

1.

a) Start at 115 and add 10 five times

115 **125 135 145 155 165**

b) Start at 58 and add 50 five times

58 **108 158 208 258 308**

c. Start at 8 and add 40 five times

8 **48 88 128 168 208**

d. Start at 35 and add 60 five times

35 **95 155 215 275 335**

Number Correct: _____

2. Fill in the squares. The numbers in each row and column add to give the products on the right and bottom.

0	**1**	1
8	3	**11**
8	**4**	

6	**2**	8
10	5	15
16	**7**	

4	**2**	6
9	**10**	**19**
13	12	

7	5	**12**
6	**5**	**11**
13	10	

6	**7**	13
3	**10**	**13**
9	17	

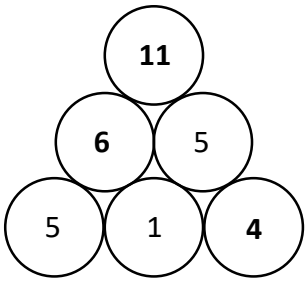
8	1	**9**
4	**0**	4
12	**1**	

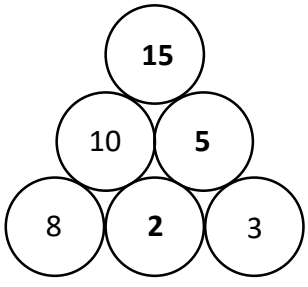
2	9	11
3	**7**	**10**
5	16	

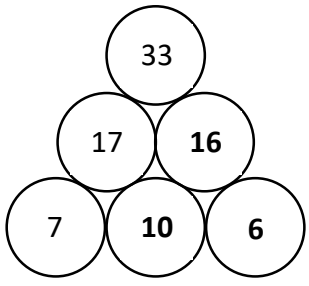
9	**0**	9
8	4	**12**
17	**4**	

Number Correct: _____

3. Fill in the empty circles with the sum of the 2 numbers next to each other in a row in the circle above the 2 numbers.







Number Correct: _____

Lesson 13: Four Minute Addition Frenzy

Students write the sum of the column and row numbers in each space for 4 minutes.
Answers provided in squares below for students to mark their work.

+	0	11	6	3	1	10	5	4	7	9	2	12	8
8	8	19	14	11	9	18	13	12	15	17	10	20	16
2	2	13	8	5	3	12	7	6	9	11	4	14	10
9	9	20	15	12	10	19	14	13	16	18	11	21	15
7	7	18	13	10	8	17	12	11	14	16	9	19	17
4	4	15	10	7	5	14	9	8	11	13	6	16	12
5	5	16	11	8	6	15	10	9	12	14	7	17	13
10	10	21	16	13	11	20	15	14	17	19	12	22	18
1	1	12	7	4	2	11	6	5	8	10	3	13	9
6	6	17	12	9	7	16	11	10	13	15	8	18	14
12	12	23	18	15	13	22	17	16	19	21	14	24	20

Number Correct: _____

Lesson 13 Bingo

Students choose and write 9 of the answer numbers (from the list of 15 answers given in their workbooks) in the squares within their 3x3 grid. Their grid should have all squares filled with 9 different numbers from the list of answers.

Read out the questions in random order from the list of questions on the right without the answers (which are shown in brackets).

Students cross off the numbers in their grid if the number answers the question. The students call out “Bingo” if they have 3 answers crossed out in a row (down, across or diagonally in the grid). First student to call out Bingo wins. You should check that the student does have Bingo. For a longer game, all the squares in the grid could be required to be crossed off to win.

Questions (Addition):

7 + 10 [17]
4 + 5 [9]
3 + 7 [10]
6 + 2 [8]
1 + 0 [1]
12 + 9 [21]
10 + 8 [18]
0 + 0 [0]
1 + 6 [7]
2 + 2 [4]
7 + 8 [15]
5 + 7 [12]
4 + 12 [16]
11 + 9 [20]
7 + 6 [13]

Lesson 14: – 0 and – 1

Addition and Subtraction Facts + 0 and – 0 Students fill in the highlighted ones below			
0 + 0 = 0	0 + 0 = 0	0 – 0 = 0	0 – 0 = 0
1 + 0 = 1	0 + 1 = 1	1 – 0 = 1	1 – 1 = 0
2 + 0 = 2	0 + 2 = 2	2 – 0 = 2	2 – 2 = 0
3 + 0 = 3	0 + 3 = 3	3 – 0 = 3	3 – 3 = 0
4 + 0 = 4	0 + 4 = 4	4 – 0 = 4	4 – 4 = 0
5 + 0 = 5	0 + 5 = 5	5 – 0 = 5	5 – 5 = 0
6 + 0 = 6	0 + 6 = 6	6 – 0 = 6	6 – 6 = 0
7 + 0 = 7	0 + 7 = 7	7 – 0 = 7	7 – 7 = 0
8 + 0 = 8	0 + 8 = 8	8 – 0 = 8	8 – 8 = 0
9 + 0 = 9	0 + 9 = 9	9 – 0 = 9	9 – 9 = 0
10 + 0 = 10	0 + 10 = 10	10 – 0 = 10	10 – 10 = 0
11 + 0 = 11	0 + 11 = 11	11 – 0 = 11	11 – 11 = 0
12 + 0 = 12	0 + 12 = 12	12 – 0 = 12	12 – 12 = 0

Addition and Subtraction Facts + 1 and – 1			
0 + 1 = 1	1 + 0 = 1	1 – 1 = 0	1 – 0 = 1
1 + 1 = 2	1 + 1 = 2	2 – 1 = 1	2 – 1 = 1
2 + 1 = 3	1 + 2 = 3	3 – 1 = 2	3 – 2 = 1
3 + 1 = 4	1 + 3 = 4	4 – 1 = 3	4 – 3 = 1
4 + 1 = 5	1 + 4 = 5	5 – 1 = 4	5 – 4 = 1
5 + 1 = 6	1 + 5 = 6	6 – 1 = 5	6 – 5 = 1
6 + 1 = 7	1 + 6 = 7	7 – 1 = 6	7 – 6 = 1
7 + 1 = 8	1 + 7 = 8	8 – 1 = 7	8 – 7 = 1
8 + 1 = 9	1 + 8 = 9	9 – 1 = 8	9 – 8 = 1
9 + 1 = 10	1 + 9 = 10	10 – 1 = 9	10 – 9 = 1
10 + 1 = 11	1 + 10 = 11	11 – 1 = 10	11 – 10 = 1
11 + 1 = 12	1 + 11 = 12	12 – 1 = 11	12 – 11 = 1
12 + 1 = 13	1 + 12 = 13	13 – 1 = 12	13 – 12 = 1

Lesson 14 Intention & Language

Lesson Intention

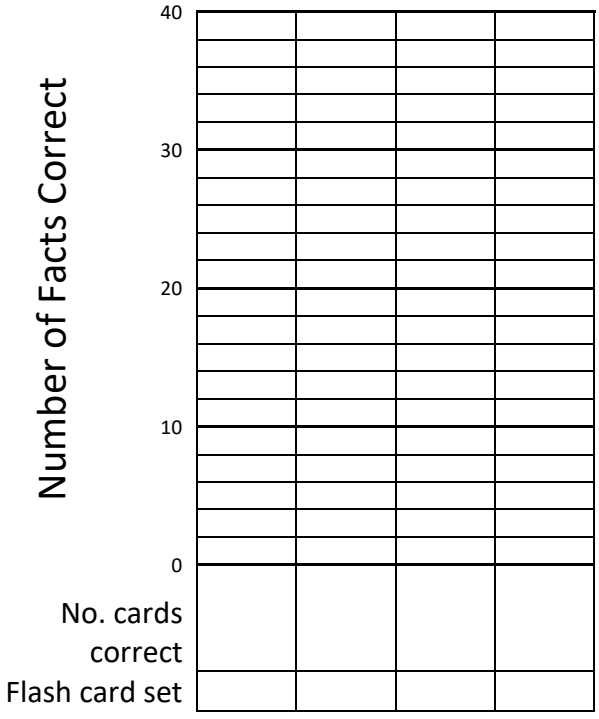
In these Intervention Mathematics lessons, we are looking at the number facts up to 12. Today our focus is on is adding numbers from 0 to 12, and subtracting 0, 1 and 2. In our earlier lessons today we looked at adding numbers from 0 to 10. In this lesson our focus is subtracting 0 and 1. While students may know these number facts, can they do the questions fast and get the right answers?

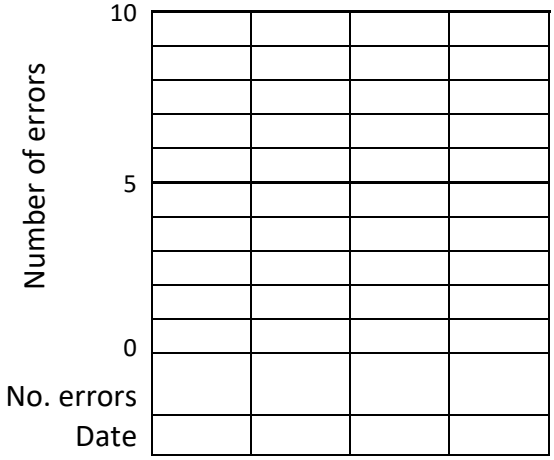
Lesson Language

Subtract, none, zero.

Lesson 14 Flash Cards Graph

Students work in groups of 2 or 3 and time each other as they answer as many flash cards as they can in one minute. Flash cards are placed in two piles as answered, based on whether correct or incorrect. Students should graph the number of flash cards they had correct and incorrect for each attempt below (with enough space for up to four attempts).





Lesson 14 Speed Questions (+, - 0 & 1)

Students answer as many as they can in 2 minutes, then read out answers (in []) for students to mark.

4 - 1 = [3]	2 - 1 = [1]	5 - 0 = [5]	2 + 0 = [2]
11 - 1 = [10]	1 + 11 = [12]	10 - [0] = 10	[12] - 1 = 11
9 - 0 = [9]	[1] - 0 = 1	8 - 1 = [7]	3 - [0] = 3
1 + 1 = [2]	3 - 1 = [2]	12 - [1] = 11	6 - 0 = [6]
7 - [1] = 6	10 - 1 = [9]	1 + 4 = [5]	9 - 0 = [9]
1 - [0] = 1	1 + 1 = [2]	6 - 1 = [5]	8 - 0 = [8]
1 + 5 = [6]	7 - [0] = 7	[1] - 0 = 1	0 - 0 = [0]
9 - 1 = [8]	[0] - 0 = 0	10 - 1 = [9]	7 - [0] = 7
[1] - 0 = 1	12 - 1 = [11]	0 + 7 = [7]	[3] - 1 = 2
[9] - 0 = 9	2 - [1] = 1	[10] - 0 = 10	10 + 0 = [10]

Number Correct _____ Number of Errors _____

Lesson 14 Work Sheet

Answers are shown in bold below for students to mark their work.

1. a) Circle which number is two thousand and thirty seven

2307 2370 **2037** 2073

b) Circle which number is three thousand and fifty four

3054 3504 3540 3045

c) Circle which number is seven thousand, one hundred and three

1370 7013 7130 **7103**

Number Correct: _____

2. Fill in the squares. Subtract across and down. The first has been done for you.

4	2	**2**
3	1	**2**
1	**1**	

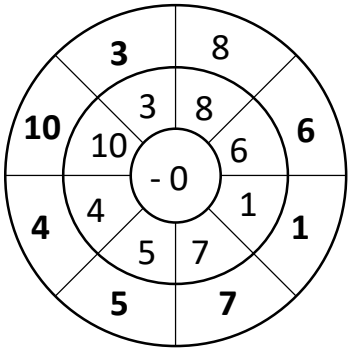
7	3	**4**
1	0	**1**
6	**3**	

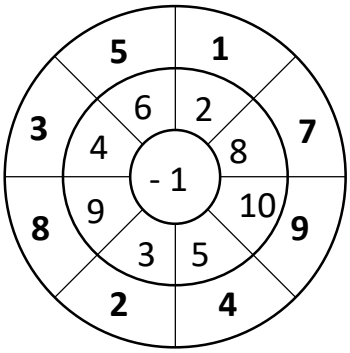
9	6	**3**
1	0	**1**
8	**6**	

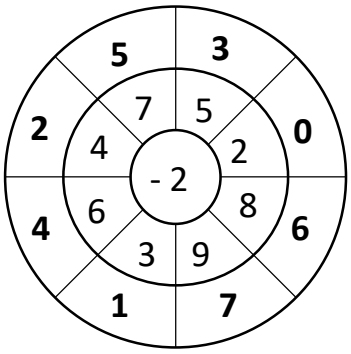
Number Correct: _____

Lesson 14: Four Minute Subtraction Frenzy

Students subtract the number in the inside circle from the number in the middle circle and write their answer in the empty space for 4 minutes. The first has been done. Answers provided in bold below.







Number Correct: _____

Lesson 14 Bingo

Students choose and write 9 of the answer numbers (from the list of 15 answers given in their workbooks) in the squares within their 3x3 grid. Their grid should have all squares filled with 9 different numbers from the list of answers.

Read out the questions in random order from the list of questions on the right without the answers (which are shown in brackets).

Students cross off the numbers in their grid if the number answers the question. The students call out “Bingo” if they have 3 answers crossed out in a row (down, across or diagonally in the grid). First student to call out Bingo wins. You should check that the student does have Bingo. For a longer game, all the squares in the grid could be required to be crossed off to win.

Questions (- 0 & 1):

17 - 1 [16]
10 - 0 [10]
23 - 0 [23]
16 - 1 [15]
4 - 1 [3]
18 - 1 [17]
11 - 0 [11]
10 - 1 [9]
20 - 0 [20]
5 - 1 [4]
0 - 0 [0]
13 - 1 [12]
8 - 0 [8]
2 - 1 [1]
5 - 0 [5]

Lesson 15: – 2

Addition and Subtraction Facts + 2 and – 2 Students fill in the highlighted ones below			
0 + 2 = 2	2 + 0 = 2	2 – 2 = 0	2 – 0 = 2
1 + 2 = 3	2 + 1 = 3	3 – 2 = 1	3 – 1 = 2
2 + 2 = 4	2 + 2 = 4	4 – 2 = 2	4 – 2 = 2
3 + 2 = 5	2 + 3 = 5	5 – 2 = 3	5 – 3 = 2
4 + 2 = 6	2 + 4 = 6	6 – 2 = 4	6 – 4 = 2
5 + 2 = 7	2 + 5 = 7	7 – 2 = 5	7 – 5 = 2
6 + 2 = 8	2 + 6 = 8	8 – 2 = 6	8 – 6 = 2
7 + 2 = 9	2 + 7 = 9	9 – 2 = 7	9 – 7 = 2
8 + 2 = 10	2 + 8 = 10	10 – 2 = 8	10 – 8 = 2
9 + 2 = 11	2 + 9 = 11	11 – 2 = 9	11 – 9 = 2
10 + 2 = 12	2 + 10 = 12	12 – 2 = 10	12 – 10 = 2
11 + 2 = 13	2 + 11 = 13	13 – 2 = 11	13 – 11 = 2
12 + 2 = 14	2 + 12 = 14	14 – 2 = 12	14 – 12 = 2

Lesson 15 Intention & Language

Lesson Intention

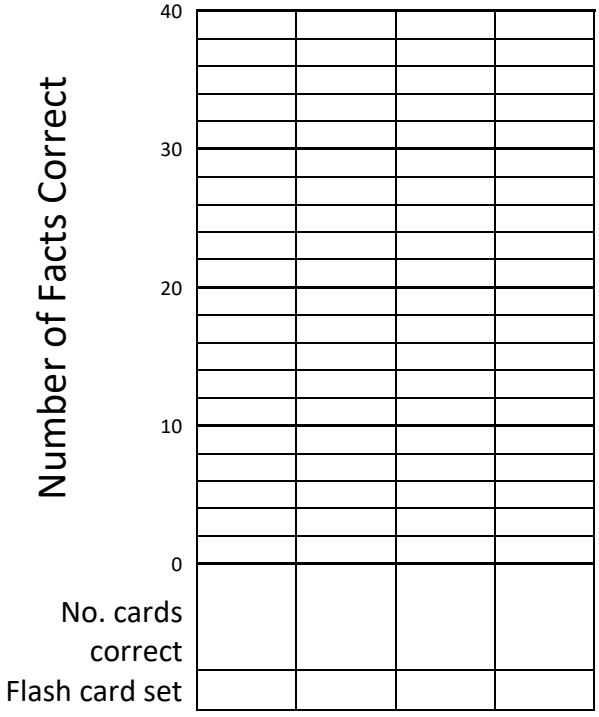
In these Intervention Mathematics lessons, we are looking at the number facts up to 12. Today our focus is on is adding numbers from 0 to 12, and subtracting 0, 1 and 2. In our earlier lessons today we looked at adding numbers from 0 to 12, and subtracting 0 and 1. In this lesson our focus is subtracting 2. While students may know these number facts, can they do the questions fast and get the right answers?

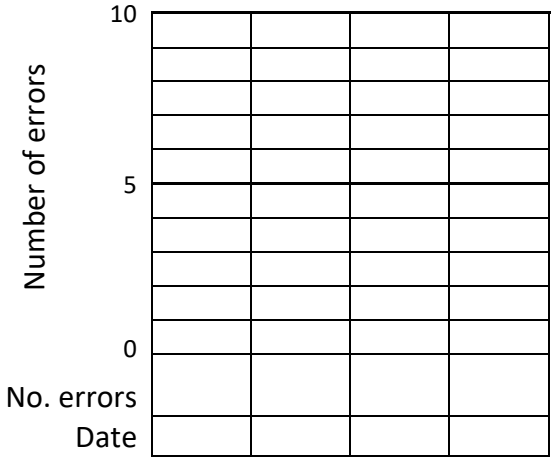
Lesson Language

Minus, take away, subtraction.

Lesson 15 Flash Cards Graph

Students work in groups of 2 or 3 and time each other as they answer as many flash cards as they can in one minute. Flash cards are placed in two piles as answered, based on whether correct or incorrect. Students should graph the number of flash cards they had correct and incorrect for each attempt below (with enough space for up to four attempts).





Lesson 15 Speed Questions (+ & - 2)

Students answer as many as they can in 2 minutes, then read out answers (in []) for students to mark.

6 - 2 = [4]	5 - 2 = [3]	8 - 2 = [6]	7 - 2 = [5]
9 - 2 = [7]	2 - 2 = [0]	12 - 2 = [10]	5 - 2 = [3]
11 - 2 = [9]	[10] - 2 = 8	2 - 0 = [2]	4 - 2 = [2]
4 - 2 = [2]	7 - [2] = 5	3 - 2 = [1]	[11] - 2 = 9
[7] - 2 = 5	9 - 2 = [7]	7 - [2] = 5	[2] - 0 = 2
2 + 6 = [8]	[6] - 2 = 4	2 - [0] = 2	3 + 2 = [5]
2 - [1] = 1	12 + 2 = [14]	2 + 1 = [3]	4 - [2] = 2
3 - [2] = 1	4 + 2 = [6]	[10] - 2 = 8	2 - [1] = 1
12 + 2 = [14]	11 - [2] = 9	2 + 10 = [12]	12 - 2 = [10]
[11] - 2 = 9	9 - 2 = [7]	[2] - 1 = 1	2 + 12 = [14]

Number Correct _____ Number of Errors _____

Lesson 15 Work Sheet

Answers are shown in bold below for students to mark their work.

1.

a) Start at 27 and subtract 3 five times

27 **24** **21** **18** **15** **12** 9

b) Start at 39 and subtract 6 five times

39 **33** **27** **21** **15** **9** 3

c) Start at 52 and subtract 4 five times

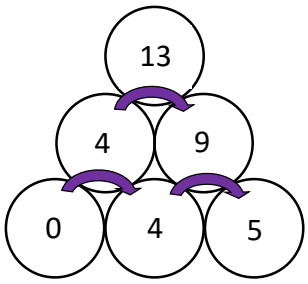
52 **48** **44** **40** **36** **32** 28

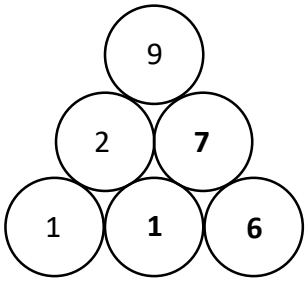
d) Start at 91 and subtract 8 five times

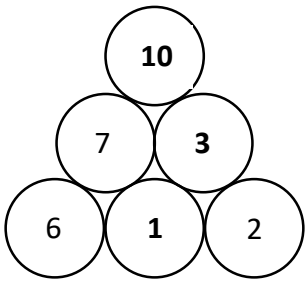
91 **83** **75** **67** **59** **51** 43

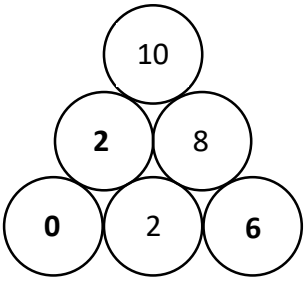
Number Correct: _____

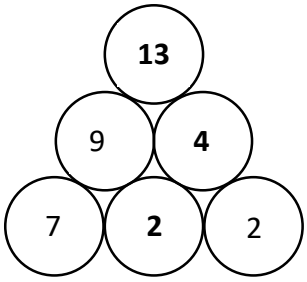
2. Fill in the empty circles with the sum of the 2 numbers next to each other in a row in the circle above the 2 numbers. The first one is done for you.

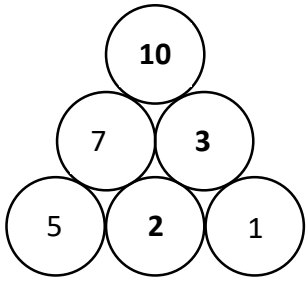












Number Correct: _____

3. Choose numbers from the box to complete the subtraction number sentences.

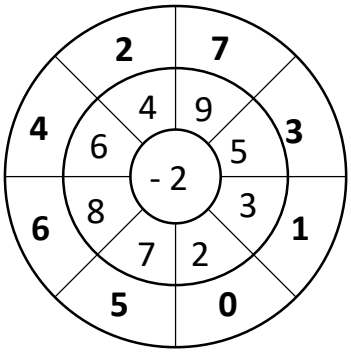
0	1	2	6	7	8

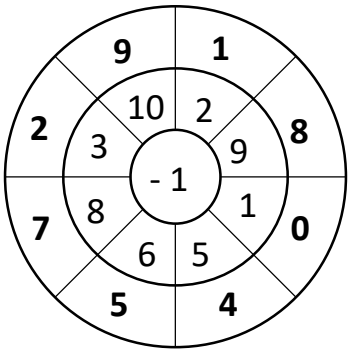
9	-	2	=	**7**	10	-	9	=	**1**	**8**	-	2	=	6
6	-	**2**	=	4	**6**	-	0	=	6	9	-	**0**	=	9

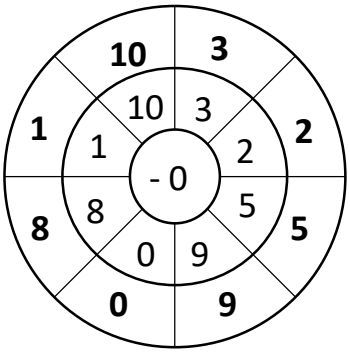
Number Correct: _____

Lesson 15: Four Minute Subtraction Frenzy

Students subtract the number in the inside circle from the number in the middle circle and write their answer in the empty space for 4 minutes. Answers provided in bold below.







Number Correct: _____

Lesson 15 Reflection & Metacognition

Students answer the questions below.

What did you learn today?

_____

_____

_____

What were your improvements today?

_____

_____

_____

How confident do you feel about today's focus topic of adding numbers from 0 to 12 and subtracting 0, 1 and 2 after today's lessons? Circle one below:

			
I am not sure/confused about this topic	I have some questions about this topic	I think I can do this topic	I am sure I can do this topic

Lesson 16: – 4

Addition and Subtraction Facts + 4 and – 4 Students fill in the highlighted ones below			
0 + 4 = 4	4 + 0 = 4	4 – 4 = 0	4 – 0 = 4
1 + 4 = 5	4 + 1 = 5	5 – 4 = 1	5 – 1 = 4
2 + 4 = 6	4 + 2 = 6	6 – 4 = 2	6 – 2 = 4
3 + 4 = 7	4 + 3 = 7	7 – 4 = 3	7 – 3 = 4
4 + 4 = 8	4 + 4 = 8	8 – 4 = 4	8 – 4 = 4
5 + 4 = 9	4 + 5 = 9	9 – 4 = 5	9 – 5 = 4
6 + 4 = 10	4 + 6 = 10	10 – 4 = 6	10 – 6 = 4
7 + 4 = 11	4 + 7 = 11	11 – 4 = 7	11 – 7 = 4
8 + 4 = 12	4 + 8 = 12	12 – 4 = 8	12 – 8 = 4
9 + 4 = 13	4 + 9 = 13	13 – 4 = 9	13 – 9 = 4
10 + 4 = 14	4 + 10 = 14	14 – 4 = 10	14 – 10 = 4
11 + 4 = 15	4 + 11 = 15	15 – 4 = 11	15 – 11 = 4
12 + 4 = 16	4 + 12 = 16	16 – 4 = 12	16 – 12 = 4

Lesson 16 Intention & Language

Lesson Intention

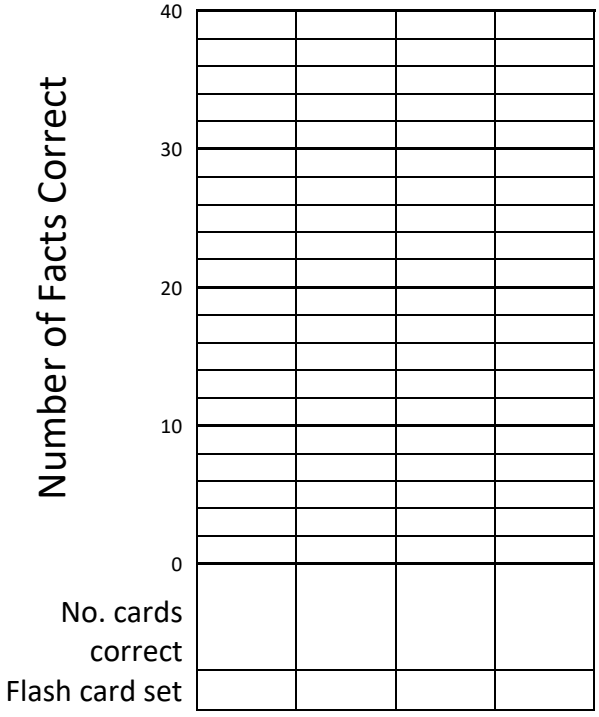
In these Intervention Mathematics lessons, we are looking at the number facts up to 12. Today our focus is on is subtracting 3, 4 and 10. In this lesson our focus is subtracting 4. While students may know these number facts, can they do the questions fast and get the right answers?

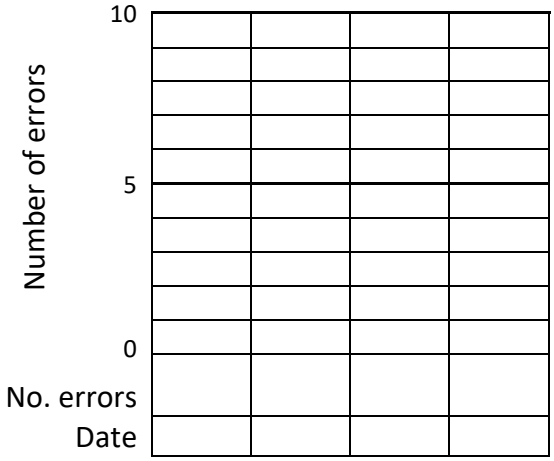
Lesson Language

Difference, difference between, how much more.

Lesson 16 Flash Cards Graph

Students work in groups of 2 or 3 and time each other as they answer as many flash cards as they can in one minute. Flash cards are placed in two piles as answered, based on whether correct or incorrect. Students should graph the number of flash cards they had correct and incorrect for each attempt below (with enough space for up to four attempts).





Lesson 16 Speed Questions (+ & - 4)

Students answer as many as they can in 2 minutes, then read out answers (in []) for students to mark.

4 + 7 = [11]	4 - 3 = [1]	4 - 1 = [3]	6 + 4 = [10]
8 - 4 = [4]	11 - 4 = [7]	4 - 3 = [1]	8 - [4] = 4
4 - [4] = 0	[5] - 4 = 1	0 + 4 = [4]	9 - 4 = [5]
4 - [3] = 1	6 - 4 = [2]	2 + 4 = [6]	5 - 4 = [1]
4 - 0 = [4]	4 - 4 = [0]	4 - 2 = [2]	[4] - 4 = 0
12 + 4 = [16]	4 - [2] = 2	[5] - 4 = 1	5 - [4] = 1
4 - 1 = [3]	7 - [4] = 3	[11] - 4 = 7	6 - 4 = [2]
[4] - 3 = 1	0 + 4 = [4]	8 - [4] = 4	[8] - 4 = 4
[8] - 4 = 4	[4] - 3 = 1	5 - [4] = 1	4 + 6 = [10]
7 - 4 = [3]	4 + 1 = [5]	11 - 4 = [7]	10 - 4 = [6]

Number Correct _____ Number of Errors _____

Lesson 16 Work Sheet

Answers are shown in bold below for students to mark their work.

1. a) Circle which number is five thousand and forty six
   5406 5460 5464 (5046)

   b) Circle which number is four thousand and seven
   4070 (4007) 4700 4707

   c) Circle which number is two thousand, three hundred and four
   (2304) 2340 2034 2043

Number Correct: _____

2. Fill in the squares. Subtract across and down.

7	4	**3**
4	3	**1**
3	**1**	

9	4	**5**
3	1	**2**
6	**3**	

10	2	**8**
4	1	**3**
6	**1**	

8	2	**6**
3	0	**3**
5	**2**	

9	5	**4**
4	3	**1**
5	**2**	

7	6	**1**
4	1	**5**
3	**5**	

Number Correct: _____

3. Apply the rule to the input number to make the output number.

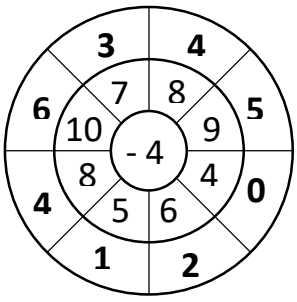
Input	Rule	Output
7	- 4	**3**
10	- 4	**6**
4	- 4	0
8	- 4	**4**
9	- 4	5

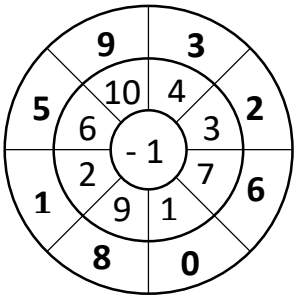
Input	Rule	Output
4	- 2	**2**
7	- 1	6
5	- 0	**5**
10	- 1	9
5	- 2	3

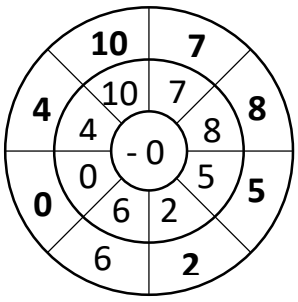
Number Correct: _____

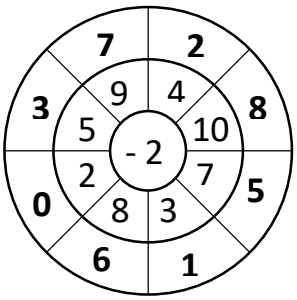
Lesson 16: Four Minute Subtraction Frenzy

Students subtract the number in the inside circle from the number in the middle circle and write their answer in the empty space for 4 minutes. Answers provided in bold below.









Number Correct: _____

Lesson 16 Bingo

Students choose and write 9 of the answer numbers (from the list of 15 answers given in their workbooks) in the squares within their 3x3 grid. Their grid should have all squares filled with 9 different numbers from the list of answers.

Read out the questions in random order from the list of questions on the right without the answers (which are shown in brackets).

Students cross off the numbers in their grid if the number answers the question. The students call out "Bingo" if they have 3 answers crossed out in a row (down, across or diagonally in the grid). First student to call out Bingo wins. You should check that the student does have Bingo. For a longer game, all the squares in the grid could be required to be crossed off to win.

Questions (-4):

10 - 4 [6]
7 - 4 [3]
13 - 4 [9]
24 - 4 [20]
6 - 4 [2]
16 - 4 [12]
4 - 4 [0]
12 - 4 [8]
8 - 4 [4]
11 - 4 [7]
5 - 4 [1]
9 - 4 [5]
14 - 4 [10]
18 - 4 [14]
15 - 4 [11]

Lesson 17: – 3

Addition and Subtraction Facts + 3 and – 3 Students fill in the highlighted ones below			
0 + 3 = 3	3 + 0 = 3	3 – 3 = 0	3 – 0 = 3
1 + 3 = 4	3 + 1 = 4	4 – 3 = 1	4 – 1 = 3
2 + 3 = 5	3 + 2 = 5	5 – 3 = 2	5 – 2 = 3
3 + 3 = 6	3 + 3 = 6	6 – 3 = 3	6 – 3 = 3
4 + 3 = 7	3 + 4 = 7	7 – 3 = 4	7 – 4 = 3
5 + 3 = 8	3 + 5 = 8	8 – 3 = 5	8 – 5 = 3
6 + 3 = 9	3 + 6 = 9	9 – 3 = 6	9 – 6 = 3
7 + 3 = 10	3 + 7 = 10	10 – 3 = 7	10 – 7 = 3
8 + 3 = 11	3 + 8 = 11	11 – 3 = 8	11 – 8 = 3
9 + 3 = 12	3 + 9 = 12	12 – 3 = 9	12 – 9 = 3
10 + 3 = 13	3 + 10 = 13	13 – 3 = 10	13 – 10 = 3
11 + 3 = 14	3 + 11 = 14	14 – 3 = 11	14 – 11 = 3
12 + 3 = 15	3 + 12 = 15	15 – 3 = 12	15 – 12 = 3

Lesson 17 Intention & Language

Lesson Intention

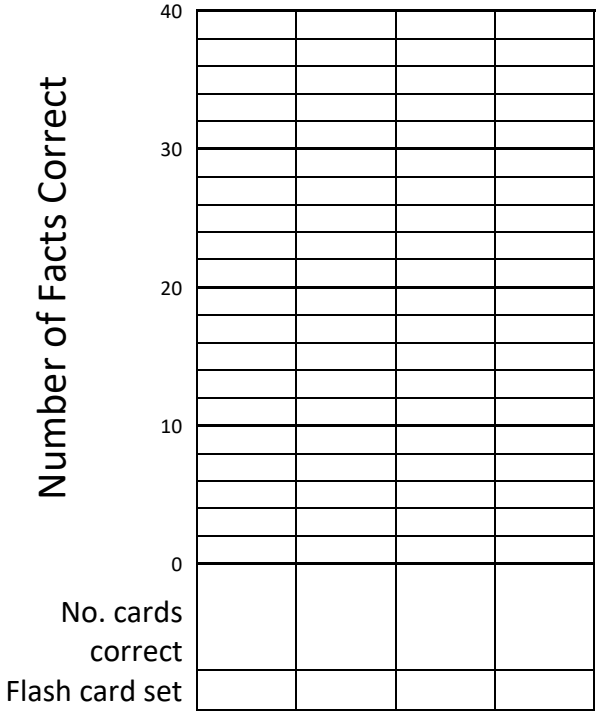
In these Intervention Mathematics lessons, we are looking at the number facts up to 12. Today our focus is on is subtracting 3, 4 and 10. In our earlier lesson today we looked at subtracting 4. In this lesson our focus is subtracting 3. While students may know these number facts, can they do the questions fast and get the right answers?

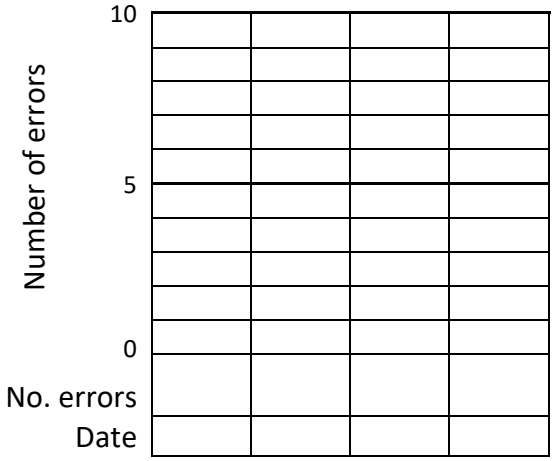
Lesson Language

Exceed, decrease, decreased by.

Lesson 17 Flash Cards Graph

Students work in groups of 2 or 3 and time each other as they answer as many flash cards as they can in one minute. Flash cards are placed in two piles as answered, based on whether correct or incorrect. Students should graph the number of flash cards they had correct and incorrect for each attempt below (with enough space for up to four attempts).





Lesson 17 Speed Questions (+ & - 3)

Students answer as many as they can in 2 minutes, then read out answers (in []) for students to mark.

3 - 1 = [2]	4 - 3 = [1]	3 + 5 = [8]	8 - 3 = [5]
3 + 6 = [9]	3 - [0] = 3	4 - [3] = 1	3 - [0] = 3
8 - 3 = [5]	4 - [3] = 1	3 + 9 = [12]	7 - [3] = 4
8 - [3] = 5	5 - 3 = [2]	3 - 1 = [2]	2 + 3 = [5]
[3] - 3 = 0	9 - 3 = [6]	6 - 3 = [3]	[10] - 3 = 7
3 - 2 = [1]	[5] - 3 = 2	10 - 3 = [7]	3 + 5 = [8]
3 - [1] = 2	[6] - 3 = 3	[4] - 3 = 1	[3] - 2 = 1
[8] - 3 = 5	11 - 3 = [8]	[11] - 3 = 8	10 - 3 = [7]
12 - 3 = [9]	3 + 6 = [9]	9 - 3 = [6]	3 - 3 = [0]
10 + 3 = [13]	3 + 12 = [15]	5 - [3] = 2	12 - 3 = [9]

Number Correct _____ Number of Errors _____

Lesson 17 Work Sheet

Answers are shown in bold below for students to mark their work.

1. a) Circle which number is seven thousand and twenty three
   7203 **7023** 7032 7302

   b) Circle which number is two thousand and three
   2030 2300 2303 **2003**

   c) Circle which number is five thousand, nine hundred and seven
   5907 5970 5070 5790

Number Correct: _____

2. Use the numbers 1 to 10 to fill the empty cells so that the sum of each horizontal block of cells equals the clue number on its left, and the sum of each vertical block the number on top. Each number can only be used once per block.

	7	4
3	**2**	**1**
8	**5**	3

	9	9
10	**7**	3
8	**2**	**6**

	8	7
4	3	**1**
11	**5**	**6**

Number Correct: _____

3. Apply the rule to the input number to make the output number.

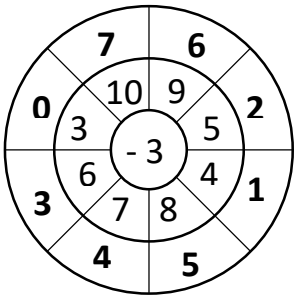
Input	Rule	Output
5	- 3	**2**
9	- 3	**6**
12	- 3	9
11	- 3	**8**
3	- 3	0

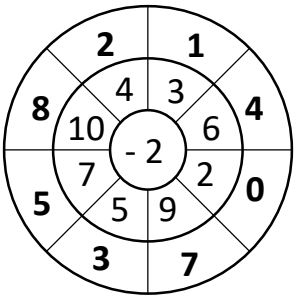
Input	Rule	Output
4	- 4	**0**
9	- 1	8
11	- 2	**9**
14	- 4	10
8	- 2	6

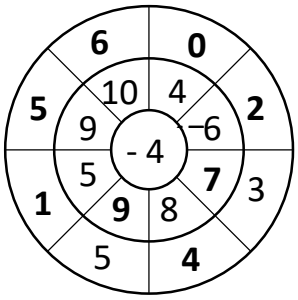
Number Correct: _____

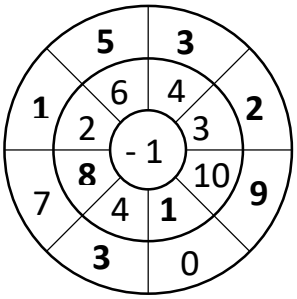
Lesson 17: Four Minute Subtraction Frenzy

Students subtract the number in the inside circle from the number in the middle circle and write their answer in the empty space for 4 minutes. Answers provided in bold below.









Number Correct: _____

Lesson 17 Bingo

Students choose and write 9 of the answer numbers (from the list of 15 answers given in their workbooks) in the squares within their 3x3 grid. Their grid should have all squares filled with 9 different numbers from the list of answers.

Read out the questions in random order from the list of questions on the right without the answers (which are shown in brackets).

Students cross off the numbers in their grid if the number answers the question. The students call out "Bingo" if they have 3 answers crossed out in a row (down, across or diagonally in the grid). First student to call out Bingo wins. You should check that the student does have Bingo. For a longer game, all the squares in the grid could be required to be crossed off to win.

Questions (-3):

5 - 3 [2]
9 - 3 [6]
13 - 3 [10]
10 - 3 [7]
7 - 3 [4]
8 - 3 [5]
11 - 3 [8]
14 - 3 [11]
4 - 3 [1]
12 - 3 [9]
20 - 3 [17]
3 - 3 [0]
6 - 3 [3]
18 - 3 [15]
15 - 3 [12]

Lesson 18: – 10

Addition and Subtraction Facts + 10 and – 10 Students fill in the highlighted ones below			
0 + 10 = 10	10 + 0 = 10	10 – 10 = 0	10 – 0 = 10
1 + 10 = 11	10 + 1 = 11	11 – 10 = 1	11 – 1 = 10
2 + 10 = 12	10 + 2 = 12	12 – 10 = 2	12 – 2 = 10
3 + 10 = 13	10 + 3 = 13	13 – 10 = 3	13 – 3 = 10
4 + 10 = 14	10 + 4 = 14	14 – 10 = 4	14 – 4 = 10
5 + 10 = 15	10 + 5 = 15	15 – 10 = 5	15 – 5 = 10
6 + 10 = 16	10 + 6 = 16	16 – 10 = 6	16 – 6 = 10
7 + 10 = 17	10 + 7 = 17	17 – 10 = 7	17 – 7 = 10
8 + 10 = 18	10 + 8 = 18	18 – 10 = 8	18 – 8 = 10
9 + 10 = 19	10 + 9 = 19	19 – 10 = 9	19 – 9 = 10
10 + 10 = 20	10 + 10 = 20	20 – 10 = 10	20 – 10 = 10
11 + 10 = 21	10 + 11 = 21	21 – 10 = 11	21 – 11 = 10
12 + 10 = 22	10 + 12 = 22	22 – 10 = 12	22 – 12 = 10

Lesson 18 Intention & Language

Lesson Intention

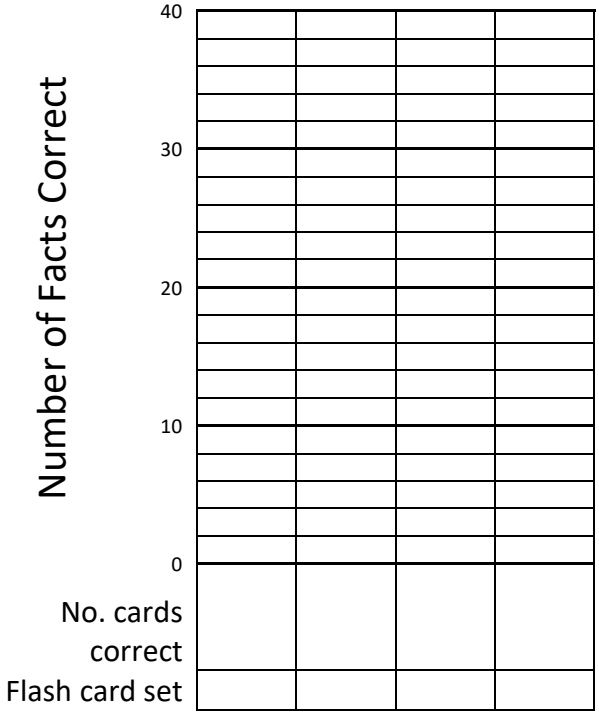
In these Intervention Mathematics lessons, we are looking at the number facts up to 12. Today our focus is on is subtracting 3, 4 and 10. In our earlier lessons today we looked at subtracting 3 and 4. In this lesson our focus is subtracting 10. While students may know these number facts, can they do the questions fast and get the right answers?

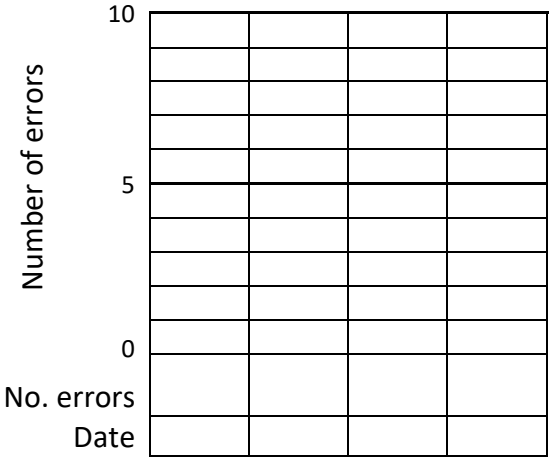
Lesson Language

Less, reduce, reduced by.

Lesson 18 Flash Cards Graph

Students work in groups of 2 or 3 and time each other as they answer as many flash cards as they can in one minute. Flash cards are placed in two piles as answered, based on whether correct or incorrect. Students should graph the number of flash cards they had correct and incorrect for each attempt below (with enough space for up to four attempts).





Lesson 18 Speed Questions (+ & - 10)

Students answer as many as they can in 2 minutes, then read out answers (in []) for students to mark.

10 - 10 = [0]	10 - 1 = [9]	11 - 10 = [1]	12 - 10 = [2]
10 - 2 = [8]	15 - 10 = [5]	10 + 7 = [17]	22 - 10 = [12]
[10] - 9 = 1	13 - 10 = [3]	11 + 10 = [21]	16 - 10 = [6]
[10] - 5 = 5	[10] - 7 = 3	10 - [4] = 6	7 + 10 = [17]
11 - [10] = 1	10 + 4 = [14]	11 - [10] = 1	10 - [1] = 9
10 - [7] = 3	10 + 2 = [12]	[10] - 9 = 1	[10] - 7 = 3
10 - 2 = [8]	10 - [10] = 0	19 - 10 = [9]	10 - [10] = 0
10 + 3 = [13]	10 - [0] = 10	14 - 10 = [4]	[17] - 10 = 7
20 - 10 = [10]	[10] - 7 = 3	21 - 10 = [11]	8 + 10 = [18]
4 + 10 = [14]	10 - 5 = [5]	[10] - 1 = 9	10 - 10 = [0]

Number Correct _____ Number of Errors _____

Lesson 18 Work Sheet

Answers are shown in bold below for students to mark their work.

1. If the '3' became a '7'; how much bigger would the new number be?

a) 134 **40**

b) 325 **400**

c) 1030 **40**

d) 3245 **4000**

e) 1423 **4**

f) 3635 **4000**

Number Correct: _____

2. Fill in the squares. Subtract across and down.

15	10	**5**
5	2	**3**
10	**8**	

16	4	**12**
9	3	**6**
7	**1**	

11	3	**8**
4	2	**2**
7	**1**	

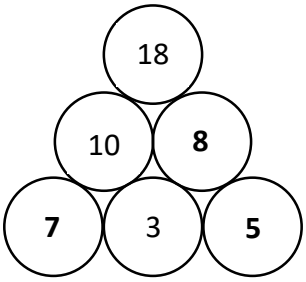
10	1	**9**
1	0	**1**
9	**1**	

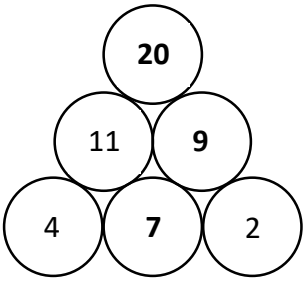
14	4	**10**
3	3	**0**
11	**1**	

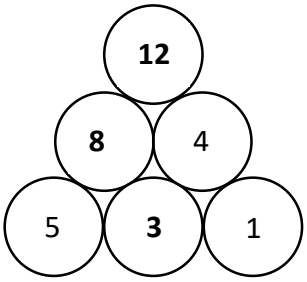
11	10	**1**
4	2	**2**
7	**8**	

Number Correct: _____

3. Fill in the empty circles with the sum of the 2 numbers next to each other in a row in the circle above the 2 numbers.



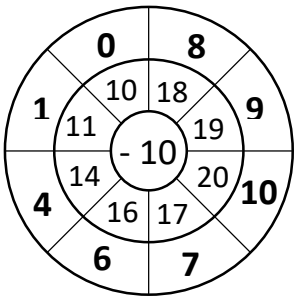


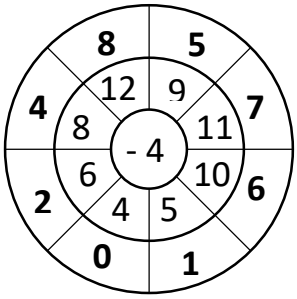


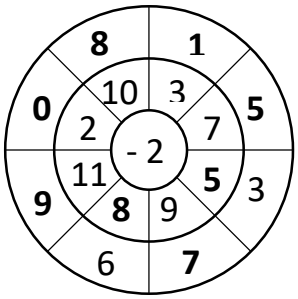
Number Correct: _____

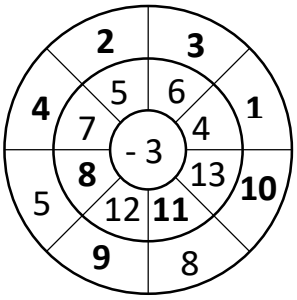
Lesson 18: Four Minute Subtraction Frenzy

Students subtract the number in the inside circle from the number in the middle circle and write their answer in the empty space for 4 minutes. Answers provided in bold below.









Number Correct: _____

Lesson 18 Reflection & Metacognition

Students answer the questions below.

What did you learn today?

_____

_____

_____

What were your improvements today?

_____

_____

_____

How confident do you feel about today's focus topic of subtracting 3, 4 and 10 after today's lessons? Circle one below:

			
I am not sure/confused about this topic	I have some questions about this topic	I think I can do this topic	I am sure I can do this topic

Lesson 19: – 11

Addition and Subtraction Facts + 11 and – 11 Students fill in the highlighted ones below			
0 + 11 = 11	11 + 0 = 11	11 – 11 = 0	11 – 0 = 11
1 + 11 = 12	11 + 1 = 12	12 – 11 = 1	12 – 1 = 11
2 + 11 = 13	11 + 2 = 13	13 – 11 = 2	13 – 2 = 11
3 + 11 = 14	11 + 3 = 14	14 – 11 = 3	14 – 3 = 11
4 + 11 = 15	11 + 4 = 15	15 – 11 = 4	15 – 4 = 11
5 + 11 = 16	11 + 5 = 16	16 – 11 = 5	16 – 5 = 11
6 + 11 = 17	11 + 6 = 17	17 – 11 = 6	17 – 6 = 11
7 + 11 = 18	11 + 7 = 18	18 – 11 = 7	18 – 7 = 11
8 + 11 = 19	11 + 8 = 19	19 – 11 = 8	19 – 8 = 11
9 + 11 = 20	11 + 9 = 20	20 – 11 = 9	20 – 9 = 11
10 + 11 = 21	11 + 10 = 21	21 – 11 = 10	21 – 10 = 11
11 + 11 = 22	11 + 11 = 22	22 – 11 = 11	22 – 11 = 11
12 + 11 = 23	11 + 12 = 23	23 – 11 = 12	23 – 12 = 11

Lesson 19 Intention & Language

Lesson Intention

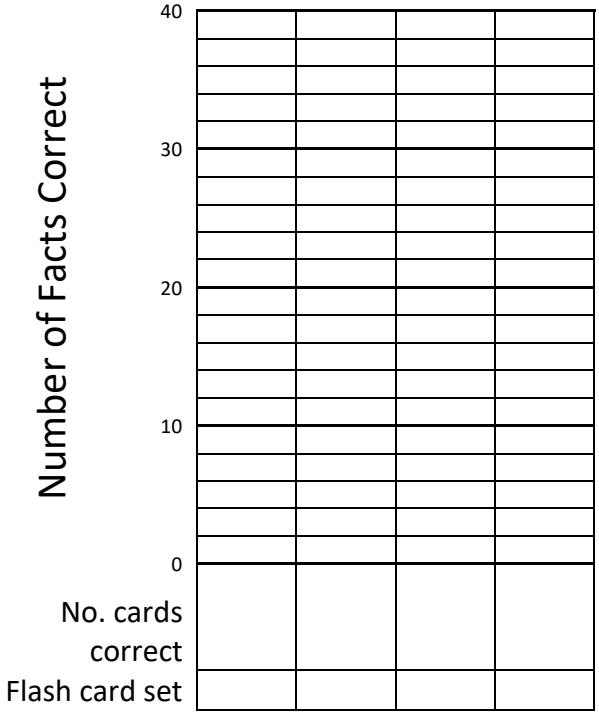
In these Intervention Mathematics lessons, we are looking at the number facts up to 12. Today our focus is on is subtracting 5, 9 and 11. In this lesson our focus is subtracting 11. While students may know these number facts, can they do the questions fast and get the right answers?

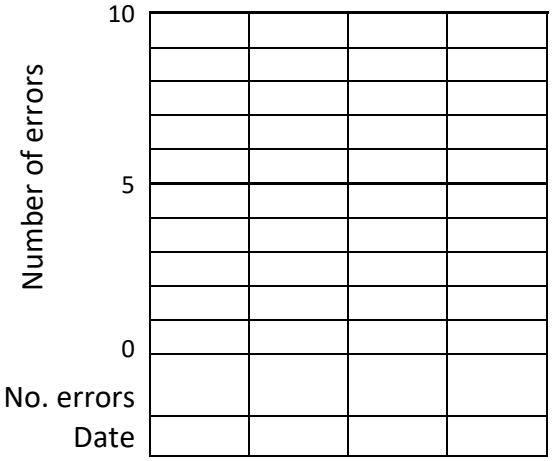
Lesson Language

Discount, debit, remove.

Lesson 19 Flash Cards Graph

Students work in groups of 2 or 3 and time each other as they answer as many flash cards as they can in one minute. Flash cards are placed in two piles as answered, based on whether correct or incorrect. Students should graph the number of flash cards they had correct and incorrect for each attempt below (with enough space for up to four attempts).





Lesson 19 Speed Questions (+ & - 11)

Students answer as many as they can in 2 minutes, then read out answers (in []) for students to mark.

13 − 11 = [2]	11 − 11 = [0]	20 − 11 = [9]	16 − 11 = [5]
15 − 11 = [4]	12 + 11 = [23]	[11] − 2 = 9	11 - 7 = [4]
1 + 11 = [12]	19 − 11 = [8]	14 − 11 = [3]	7 + 11 = [18]
11 − [6] = 5	11 − [1] = 10	11 − [6] = 5	21 − 11 = [10]
12 − 11 = [1]	11 − [6] = 5	11 − [1] = 10	11 − [0] = 11
23 − 11 = [12]	11 − 10 = [1]	3 + 11 = [14]	11 − 4 = [7]
11 + 11 = [22]	18 − 11 = [7]	[11] − 3 = 8	[17] − 11 = 6
[11] − 8 = 3	[11] − 5 = 6	22 − 11 = [11]	11 + 2 = [13]
11 − [10] = 1	3 + 11 = [14]	11 + 1 = [12]	11 − [9] = 2
[11] − 11 = 0	[11] − 7 = 4	17 − 11 = [6]	[11] − 3 = 8

Number Correct _____ Number of Errors _____

Lesson 19 Work Sheet

Answers are shown in bold below for students to mark their work.

1. Round to the nearest ten.

a.	42	**40**	d.	271	**270**
b.	9	**10**	e.	855	**860**
c.	567	**570**	f.	1256	**1260**

Number Correct: _____

2. Fill in the squares. Subtract across and down.

15	11	**4**
10	2	**8**
5	**9**	

19	9	**10**
11	6	**5**
3	**3**	

22	8	**14**
11	4	**7**
4	**4**	

Number Correct: _____

3. Use the digits 0 to 9 to fill the cells in the grid. The columns must add up to the given sums at the bottom. You must use all the digits 0 to 9 in each row, but digits may be repeated in columns. The digits in connecting unshaded cells (also diagonally) must be different.

a)

9	3	6	**8**	**7**	**0**	2	4	**5**	1
8	**5**	**9**	3	6	**4**	**7**	1	2	**0**
17	8	15	11	13	4	9	5	7	1

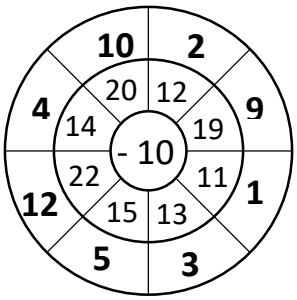
b)

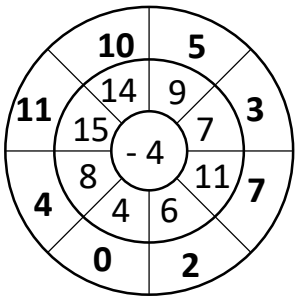
1	**6**	5	3	**9**	8	**7**	4	**2**	0
2	**8**	9	**7**	0	**6**	**5**	1	**3**	**4**
3	14	14	10	9	14	12	5	5	4

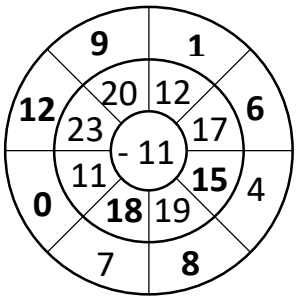
Number Correct: _____

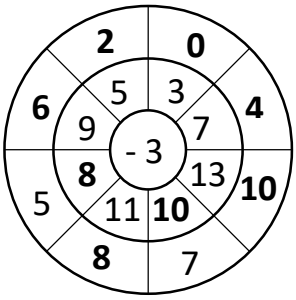
Lesson 19: Four Minute Subtraction Frenzy

Students subtract the number in the inside circle from the number in the middle circle and write their answer in the empty space for 4 minutes. Answers provided in bold below.









Number Correct: _____

Lesson 19 Bingo

Students choose and write 9 of the answer numbers (from the list of 15 answers given in their workbooks) in the squares within their 3x3 grid. Their grid should have all squares filled with 9 different numbers from the list of answers.

Read out the questions in random order from the list of questions on the right without the answers (which are shown in brackets).

Students cross off the numbers in their grid if the number answers the question. The students call out "Bingo" if they have 3 answers crossed out in a row (down, across or diagonally in the grid). First student to call out Bingo wins. You should check that the student does have Bingo. For a longer game, all the squares in the grid could be required to be crossed off to win.

Questions (-11):

20 - 11 [9]
13 - 11 [2]
16 - 11 [5]
12 - 11 [1]
25 - 11 [14]
18 - 11 [7]
11 - 11 [0]
22 - 11 [11]
14 - 11 [3]
21 - 11 [10]
17 - 11 [6]
15 - 11 [4]
23 - 11 [12]
30 - 11 [19]
19 - 11 [8]

Lesson 20: – 9

Addition and Subtraction Facts + 9 and – 9 Students fill in the highlighted ones below			
0 + 9 = 9	9 + 0 = 9	9 – 9 = 0	9 – 0 = 9
1 + 9 = 10	9 + 1 = 10	10 – 9 = 1	10 – 1 = 9
2 + 9 = 11	9 + 2 = 11	11 – 9 = 2	11 – 2 = 9
3 + 9 = 12	9 + 3 = 12	12 – 9 = 3	12 – 3 = 9
4 + 9 = 13	9 + 4 = 13	13 – 9 = 4	13 – 4 = 9
5 + 9 = 14	9 + 5 = 14	14 – 9 = 5	14 – 5 = 9
6 + 9 = 15	9 + 6 = 15	15 – 9 = 6	15 – 6 = 9
7 + 9 = 16	9 + 7 = 16	16 – 9 = 7	16 – 7 = 9
8 + 9 = 17	9 + 8 = 17	17 – 9 = 8	17 – 8 = 9
9 + 9 = 18	9 + 9 = 18	18 – 9 = 9	18 – 9 = 9
10 + 9 = 19	9 + 10 = 19	19 – 9 = 10	19 – 10 = 9
11 + 9 = 20	9 + 11 = 20	20 – 9 = 11	20 – 11 = 9
12 + 9 = 21	9 + 12 = 21	21 – 9 = 12	21 – 12 = 9

Lesson 20 Intention & Language

Lesson Intention

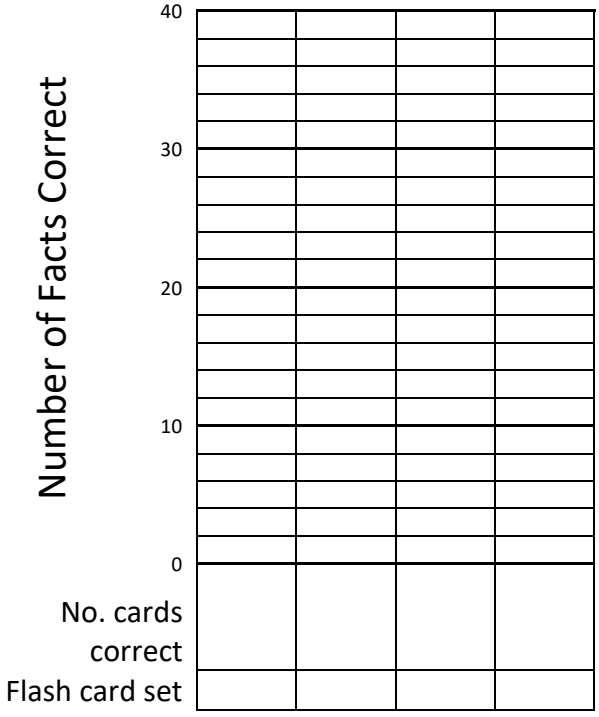
In these Intervention Mathematics lessons, we are looking at the number facts up to 12. Today our focus is on is subtracting 5, 9 and 11. In our earlier lesson today we looked at subtracting 11. In this lesson our focus is subtracting 9. While students may know these number facts, can they do the questions fast and get the right answers?

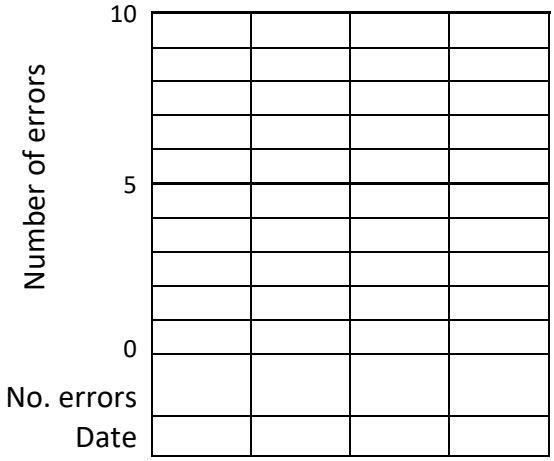
Lesson Language

Take off, take from, take out.

Lesson 20 Flash Cards Graph

Students work in groups of 2 or 3 and time each other as they answer as many flash cards as they can in one minute. Flash cards are placed in two piles as answered, based on whether correct or incorrect. Students should graph the number of flash cards they had correct and incorrect for each attempt below (with enough space for up to four attempts).





Lesson 20 Speed Questions (+ & - 9)

Students answer as many as they can in 2 minutes, then read out answers (in []) for students to mark.

11 - 9 = [2]	9 - 5 = [4]	15 - 9 = [6]	14 - 9 = [5]
20 - 9 = [11]	9 - 6 = [3]	17 - 9 = [8]	16 - 9 = [7]
10 - 9 = [1]	9 - 9 = [0]	5 + 9 = [14]	[21] - 9 = 12
[9] - 6 = 3	9 + 5 = [14]	11 - [9] = 2	8 + 9 = [17]
[9] - 5 = 4	[9] - 4 = 5	9 - [7] = 2	[13] - 9 = 4
11 - [9] = 2	[11] - 9 = 2	[9] - 5 = 4	9 - [9] = 0
1 + 9 = [10]	9 + 0 = [9]	9 - 2 = [7]	9 + 5 = [14]
9 - [2] = 7	14 - 9 = [5]	[12] - 9 = 3	9 - [7] = 2
21 - 9 = [12]	9 - [1] = 8	9 - 7 = [2]	19 - 9 = [10]
9 + 10 = [19]	9 - [5] = 4	3 + 9 = [12]	18 - 9 = [9]

Number Correct _____ Number of Errors _____

Lesson 20 Work Sheet

Answers are shown in bold below for students to mark their work.

1. If the '2' became a '6'; how much bigger would the new number be?

a) 452 **4**

b) 286 **400**

c) 5025 **40**

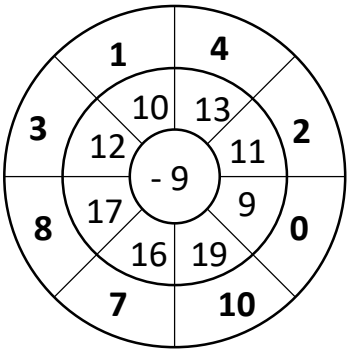
d) 3245 **400**

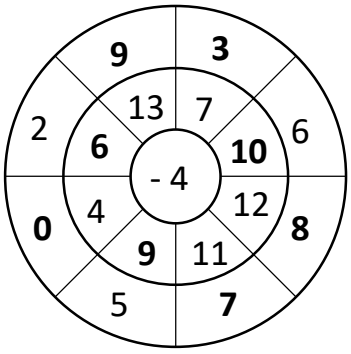
e) 1423 **40**

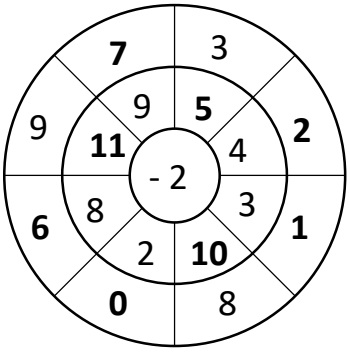
f) 2635 **4000**

Number Correct: _____

2. Subtract the number in the inside circle from the number in the middle circle and write your answer in the space.







Number Correct: _____

3. Apply the rule to the input number to make the output number.

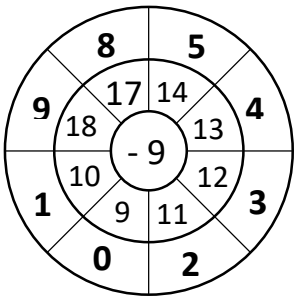
Input	Rule	Output
12	- 9	**3**
14	- 9	**5**
9	- 9	0
18	- 9	**9**
12	- 9	3

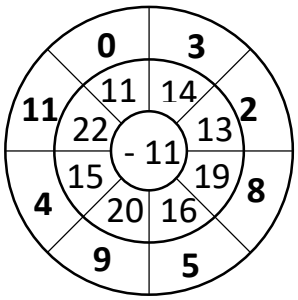
Input	Rule	Output
15	- 10	**5**
7	- 0	7
6	- 3	**3**
7	- 3	4
9	- 1	8

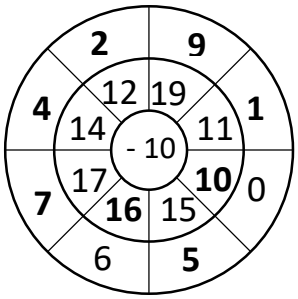
Number Correct: _____

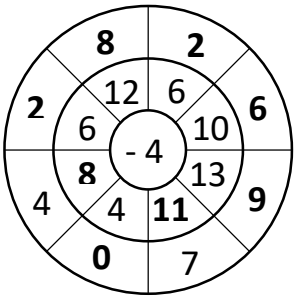
Lesson 20: Four Minute Subtraction Frenzy

Students subtract the number in the inside circle from the number in the middle circle and write their answer in the empty space for 4 minutes. Answers provided in bold below.









Number Correct: _____

Lesson 20 Bingo

Students choose and write 9 of the answer numbers (from the list of 15 answers given in their workbooks) in the squares within their 3x3 grid. Their grid should have all squares filled with 9 different numbers from the list of answers.

Read out the questions in random order from the list of questions on the right without the answers (which are shown in brackets).

Students cross off the numbers in their grid if the number answers the question. The students call out "Bingo" if they have 3 answers crossed out in a row (down, across or diagonally in the grid). First student to call out Bingo wins. You should check that the student does have Bingo. For a longer game, all the squares in the grid could be required to be crossed off to win.

Questions (-9):

19 - 9 [10]
10 - 9 [1]
14 - 9 [5]
22 - 9 [13]
15 - 9 [6]
9 - 9 [0]
29 - 9 [20]
18 - 9 [9]
11 - 9 [2]
25 - 9 [16]
13 - 9 [4]
16 - 9 [7]
12 - 9 [3]
20 - 9 [11]
17 - 9 [8]

Lesson 21: – 5

Addition and Subtraction Facts + 5 and – 5 Students fill in the highlighted ones below			
0 + 5 = 5	5 + 0 = 5	5 – 5 = 0	5 – 0 = 5
1 + 5 = 6	5 + 1 = 6	6 – 5 = 1	6 – 1 = 5
2 + 5 = 7	5 + 2 = 7	7 – 5 = 2	7 – 2 = 5
3 + 5 = 8	5 + 3 = 8	8 – 5 = 3	8 – 3 = 5
4 + 5 = 9	5 + 4 = 9	9 – 5 = 4	9 – 5 = 5
5 + 5 = 10	5 + 5 = 10	10 – 5 = 5	10 – 5 = 5
6 + 5 = 11	5 + 6 = 11	11 – 5 = 6	11 – 6 = 5
7 + 5 = 12	5 + 7 = 12	12 – 5 = 7	12 – 7 = 5
8 + 5 = 13	5 + 8 = 13	13 – 5 = 8	13 – 8 = 5
9 + 5 = 14	5 + 9 = 14	14 – 5 = 9	14 – 9 = 5
10 + 5 = 15	5 + 10 = 15	15 – 5 = 10	15 – 10 = 5
11 + 5 = 16	5 + 11 = 16	16 – 5 = 11	16 – 11 = 5
12 + 5 = 17	5 + 12 = 17	17 – 5 = 12	17 – 12 = 5

Lesson 21 Intention & Language

Lesson Intention

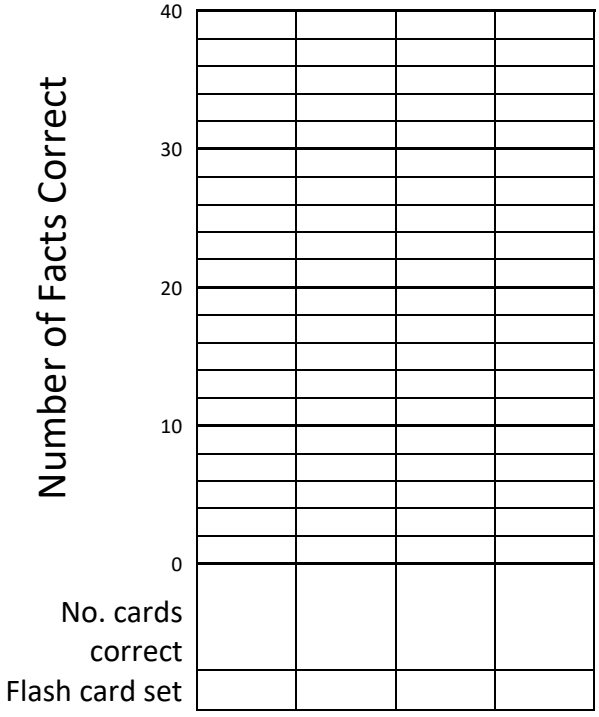
In these Intervention Mathematics lessons, we are looking at the number facts up to 12. Today our focus is on is subtracting 5, 9 and 11. In our earlier lessons today we looked at subtracting 9 and 11. In this lesson our focus is subtracting 5. While students may know these number facts, can they do the questions fast and get the right answers?

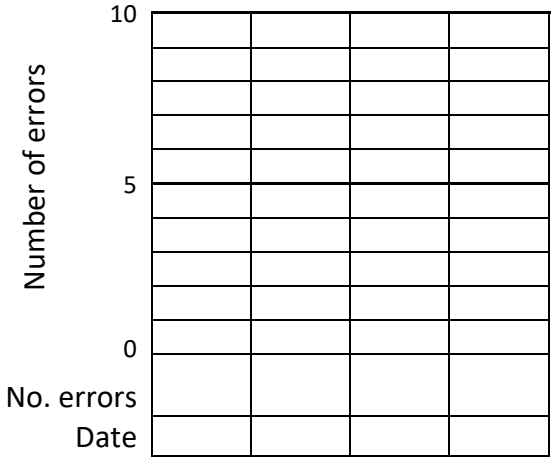
Lesson Language

Deduct, deducted, deduction.

Lesson 21 Flash Cards Graph

Students work in groups of 2 or 3 and time each other as they answer as many flash cards as they can in one minute. Flash cards are placed in two piles as answered, based on whether correct or incorrect. Students should graph the number of flash cards they had correct and incorrect for each attempt below (with enough space for up to four attempts).





Lesson 21 Speed Questions (+ & - 5)

Students answer as many as they can in 2 minutes, then read out answers (in []) for students to mark.

6 - 5 = [1]	5 - 5 = [0]	9 - 5 = [4]	16 - 5 = [11]
5 + 5 = [10]	12 - 5 = [7]	5 - 0 = [5]	5 + 7 = [12]
15 - 5 = [10]	[8] - 5 = 3	12 - 5 = [7]	10 - [5] = 5
9 - 5 = [4]	7 - [5] = 2	5 - [1] = 4	9 - 5 = [4]
5 - [3] = 2	8 + 5 = [13]	5 + 10 = [15]	17 - 5 = [12]
5 - [0] = 5	6 - [5] = 1	[11] - 5 = 6	4 + 5 = [9]
6 + 5 = [11]	5 + 7 = [12]	7 - 5 = [2]	[5] - 5 = 0
[11] - 5 = 6	7 - 5 = [2]	9 - [5] = 4	11 - 5 = [6]
8 - 5 = [3]	[7] - 5 = 2	[10] - 5 = 5	5 - [2] = 3
[5] - 3 = 2	11 - 5 = [6]	6 + 5 = [11]	[8] - 5 = 3

Number Correct _____ Number of Errors _____

Lesson 21 Work Sheet

Answers are shown in bold below for students to mark their work.

1. If the '7' became a '2'; how much smaller would the new number be?

a) 537 **5**

b) 2178 **50**

c) 7129 **5000**

d) 732 **500**

e) 5473 **50**

f) 8781 **500**

Number Correct: _____

2. Use the numbers 1 to 10 to fill the empty cells so that the sum of each horizontal block of cells equals the clue number on its left, and the sum of each vertical block the number on top. Each number can only be used once per block.

	17	14
15	**10**	5
16	**7**	**9**

	15	9
11	**7**	**4**
13	**8**	5

	13	10
12	5	**7**
11	**8**	**3**

Number Correct: _____

4. Place the numbers 1 to 9 in the 3 by 3 grid so that each horizontal and vertical line adds up to the given sum. You can only use each number once. Some numbers are already placed for you.

3	6	**1**	10
5	7	**2**	14
4	**8**	9	21
12	21	12	

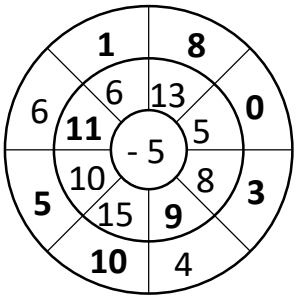
5	**6**	**9**	20
8	4	**3**	15
2	**1**	7	10
15	11	19	

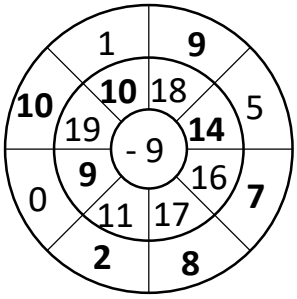
7	**1**	**4**	12
8	**5**	9	22
6	**2**	3	11
21	8	16	

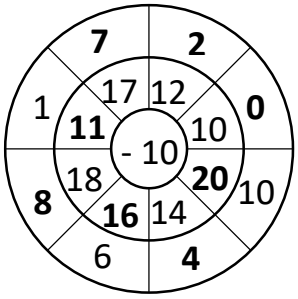
Number Correct: _____

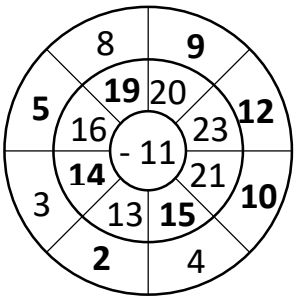
Lesson 21: Four Minute Subtraction Frenzy

Students subtract the number in the inside circle from the number in the middle circle and write their answer in the empty space for 4 minutes. Answers provided in bold below.









Number Correct: _____

Lesson 21 Reflection & Metacognition

Students answer the questions below.

What did you learn today?

_____

_____

_____

What were your improvements today?

_____

_____

_____

How confident do you feel about today's focus topic of subtracting 5, 9 and 11 after today's lessons? Circle one below:

			
I am not sure/confused about this topic	I have some questions about this topic	I think I can do this topic	I am sure I can do this topic

Lesson 22: – 6

Addition and Subtraction Facts + 6 and – 6 Students fill in the highlighted ones below			
0 + 6 = 6	6 + 0 = 6	6 – 6 = 0	6 – 0 = 6
1 + 6 = 7	6 + 1 = 7	7 – 6 = 1	7 – 1 = 6
2 + 6 = 8	6 + 2 = 8	8 – 6 = 2	8 – 2 = 6
3 + 6 = 9	6 + 3 = 9	9 – 6 = 3	9 – 3 = 6
4 + 6 = 10	6 + 4 = 10	10 – 6 = 4	10 – 4 = 6
5 + 6 = 11	6 + 5 = 11	11 – 6 = 5	11 – 5 = 6
6 + 6 = 12	6 + 6 = 12	12 – 6 = 6	12 – 6 = 6
7 + 6 = 13	6 + 7 = 13	13 – 6 = 7	13 – 7 = 6
8 + 6 = 14	6 + 8 = 14	14 – 6 = 8	14 – 8 = 6
9 + 6 = 15	6 + 9 = 15	15 – 6 = 9	15 – 9 = 6
10 + 6 = 16	6 + 10 = 16	16 – 6 = 10	16 – 10 = 6
11 + 6 = 17	6 + 11 = 17	17 – 6 = 11	17 – 11 = 6
12 + 6 = 18	6 + 12 = 18	18 – 6 = 12	18 – 12 = 6

Lesson 22 Intention & Language

Lesson Intention

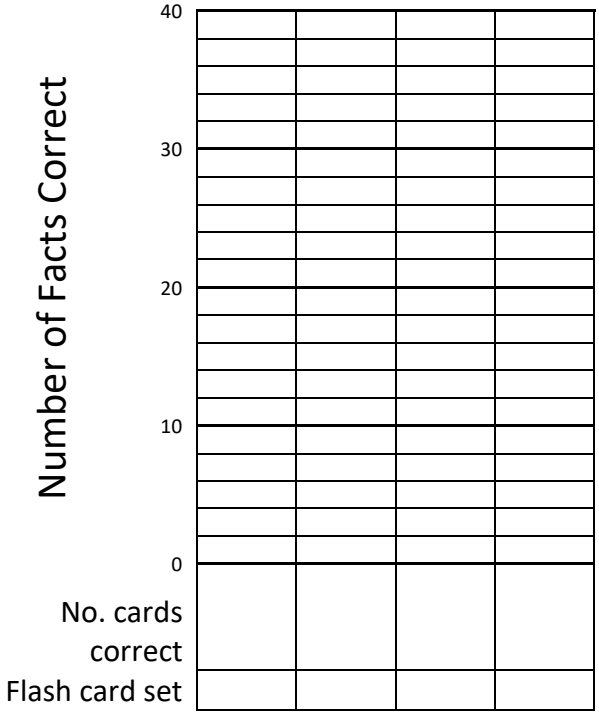
In these Intervention Mathematics lessons, we are looking at the number facts up to 12. Today our focus is on is subtracting 6, 7 and 8. In this lesson our focus is subtracting 6. While students may know these number facts, can they do the questions fast and get the right answers?

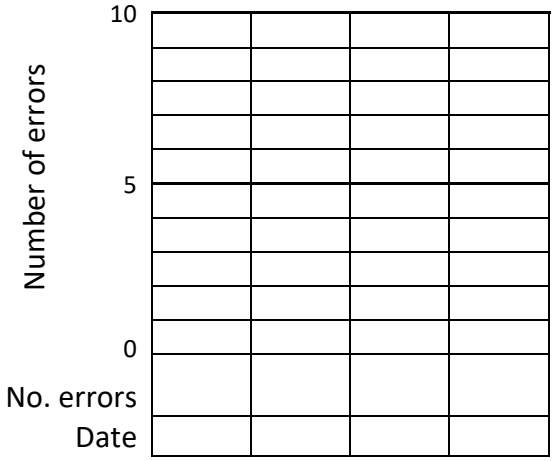
Lesson Language

Withhold, withdraw, withdrew.

Lesson 22 Flash Cards Graph

Students work in groups of 2 or 3 and time each other as they answer as many flash cards as they can in one minute. Flash cards are placed in two piles as answered, based on whether correct or incorrect. Students should graph the number of flash cards they had correct and incorrect for each attempt below (with enough space for up to four attempts).





Lesson 22 Speed Questions (+ & - 6)

Students answer as many as they can in 2 minutes, then read out answers (in []) for students to mark.

6 - 4 = [2]	16 - 6 = [10]	6 - 2 = [4]	6 - 3 = [3]
12 - 6 = [6]	9 - 6 = [3]	7 - [6] = 1	11 - 6 = [5]
10 - 6 = [4]	6 - 6 = [0]	6 - [1] = 5	6 + 11 = [17]
14 - 6 = [8]	[9] - 6 = 3	8 + 6 = [14]	[6] - 1 = 5
6 + 4 = [10]	10 + 6 = [16]	10 - 6 = [4]	12 - [6] = 6
7 + 6 = [13]	10 - [6] = 4	[7] - 6 = 1	9 + 6 = [15]
10 - [6] = 4	[6] - 5 = 1	[11] - 6 = 5	6 - [5] = 1
[6] - 0 = 6	8 - [6] = 2	13 - 6 = [7]	15 - 6 = [9]
6 - [3] = 3	6 + 6 = [12]	18 - 6 = [12]	17 - 6 = [11]
[6] - 3 = 3	6 - 5 = [1]	11 + 6 = [17]	6 – 5 = [1]

Number Correct _____ Number of Errors _____

Lesson 22 Work Sheet

Answers are shown in bold below for students to mark their work.

1. If the '7' became a '1'; how much smaller would the new number be?

a) 752 **600**

b) 287 **6**

c) 5725 **600**

d) 7245 **6000**

e) 1473 **60**

f) 2735 **600**

Number Correct: _____

2. Fill in the squares. Subtract across and down.

15	13	**2**
9	5	**4**
6	**8**	

16	4	**12**
5	2	**3**
11	**2**	

11	6	**5**
9	2	**7**
2	**4**	

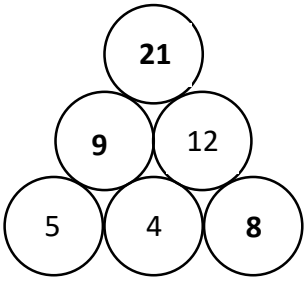
10	8	**2**
6	3	**3**
4	**5**	

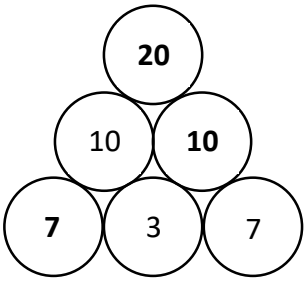
14	12	**2**
3	3	**0**
11	**9**	

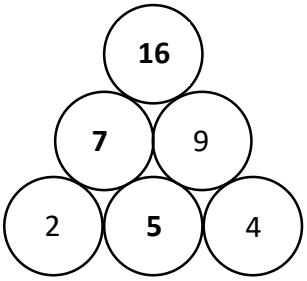
17	10	**7**
9	5	**4**
8	**5**	

Number Correct: _____

3. Fill in the empty circles with the sum of the 2 numbers next to each other in a row in the circle above the 2 numbers.



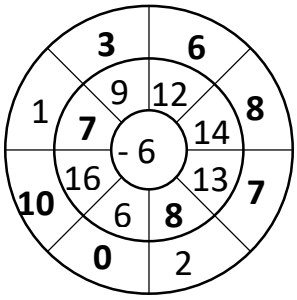


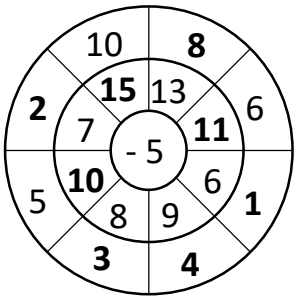


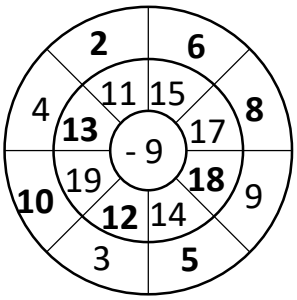
Number Correct: _____

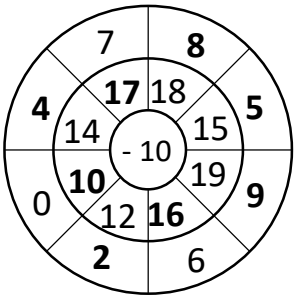
Lesson 22: Four Minute Subtraction Frenzy

Students subtract the number in the inside circle from the number in the middle circle and write their answer in the empty space for 4 minutes. Answers provided in bold below.









Number Correct: _____

Lesson 22 Bingo

Students choose and write 9 of the answer numbers (from the list of 15 answers given in their workbooks) in the squares within their 3x3 grid. Their grid should have all squares filled with 9 different numbers from the list of answers.

Read out the questions in random order from the list of questions on the right without the answers (which are shown in brackets).

Students cross off the numbers in their grid if the number answers the question. The students call out "Bingo" if they have 3 answers crossed out in a row (down, across or diagonally in the grid). First student to call out Bingo wins. You should check that the student does have Bingo. For a longer game, all the squares in the grid could be required to be crossed off to win.

Questions (-6):

12 - 6 [6]
18 - 6 [12]
6 - 6 [0]
11 - 6 [5]
24 - 6 [18]
10 - 6 [4]
15 - 6 [9]
7 - 6 [1]
26 - 6 [20]
13 - 6 [7]
8 - 6 [2]
21 - 6 [15]
14 - 6 [8]
9 - 6 [3]
16 - 6 [10]

Lesson 23: – 7

Addition and Subtraction Facts + 7 and – 7 Students fill in the highlighted ones below			
0 + 7 = 7	7 + 0 = 7	7 – 7 = 0	7 – 0 = 7
1 + 7 = 8	7 + 1 = 8	8 – 7 = 1	8 – 1 = 7
2 + 7 = 9	7 + 2 = 9	9 – 7 = 2	9 – 2 = 7
3 + 7 = 10	7 + 3 = 10	10 – 7 = 3	10 – 3 = 7
4 + 7 = 11	7 + 4 = 11	11 – 7 = 4	11 – 4 = 7
5 + 7 = 12	7 + 5 = 12	12 – 7 = 5	12 – 5 = 7
6 + 7 = 13	7 + 6 = 13	13 – 7 = 6	13 – 6 = 7
7 + 7 = 14	7 + 7 = 14	14 – 7 = 7	14 – 7 = 7
8 + 7 = 15	7 + 8 = 15	15 – 7 = 8	15 – 8 = 7
9 + 7 = 16	7 + 9 = 16	16 – 7 = 9	16 – 9 = 7
10 + 7 = 17	7 + 10 = 17	17 – 7 = 10	17 – 10 = 7
11 + 7 = 18	7 + 11 = 18	18 – 7 = 11	18 – 11 = 7
12 + 7 = 19	7 + 12 = 19	19 – 7 = 12	19 – 12 = 7

Lesson 23 Intention & Language

Lesson Intention

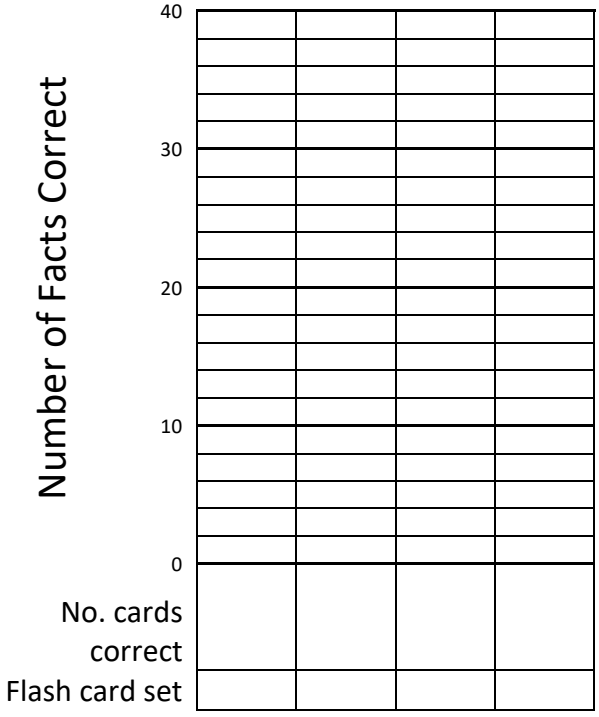
In these Intervention Mathematics lessons, we are looking at the number facts up to 12. Today our focus is on is subtracting 6, 7 and 8. In our earlier lesson today we looked at subtracting 6. In this lesson our focus is subtracting 7. While students may know these number facts, can they do the questions fast and get the right answers?

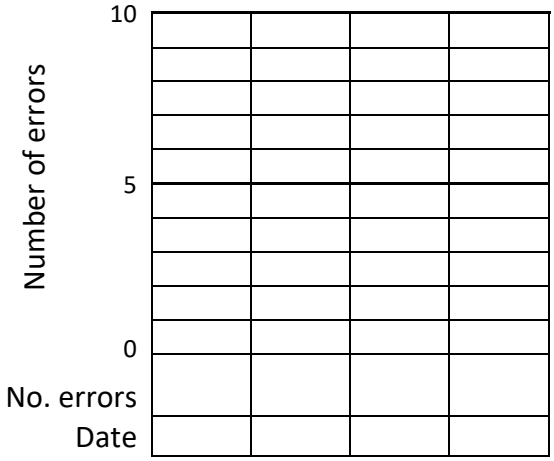
Lesson Language

How much less, change, vary.

Lesson 23 Flash Cards Graph

Students work in groups of 2 or 3 and time each other as they answer as many flash cards as they can in one minute. Flash cards are placed in two piles as answered, based on whether correct or incorrect. Students should graph the number of flash cards they had correct and incorrect for each attempt below (with enough space for up to four attempts).





Lesson 23 Speed Questions (+ & - 7)

Students answer as many as they can in 2 minutes, then read out answers (in []) for students to mark.

7 - 7 = [0]	8 - 7 = [1]	19 - 7 = [12]	11 - 7 = [4]
14 - 7 = [7]	7 + 5 = [12]	10 - 7 = [3]	13 - 7 = [6]
7 - 1 = [6]	7 - [3] = 4	7 - [7] = 0	[12] - 7 = 5
9 - [7] = 2	7 - 0 = [7]	7 - 5 = [2]	15 - 7 = [8]
7 + 3 = [10]	7 - [1] = 6	[7] - 3 = 4	7 - [4] = 3
7 + 7 = [14]	9 - 7 = [2]	[14] - 7 = 7	7 - [1] = 6
[7] - 2 = 5	[8] - 7 = 1	9 - 7 = [2]	6 + 7 = [13]
[11] - 7 = 4	8 + 7 = [15]	8 - [7] = 1	20 - 7 = [13]
[12] - 7 = 5	[17] - 7 = 10	9 + 7 = [16]	[10] - 7 = 3
7 - [6] = 1	18 - 7 = [11]	7 + 1 = [8]	8 + 7 = [15]

Number Correct _____ Number of Errors _____

Lesson 23 Work Sheet

Answers are shown in bold below for students to mark their work.

1. Round to the nearest ten.

a) 27 **30**

b) 24 **20**

c) 132 **130**

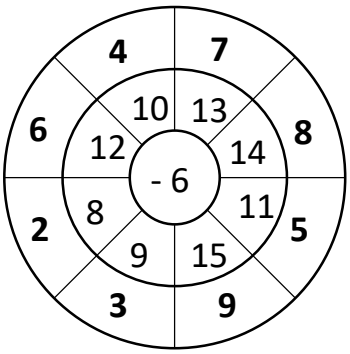
d) 2407 **2410**

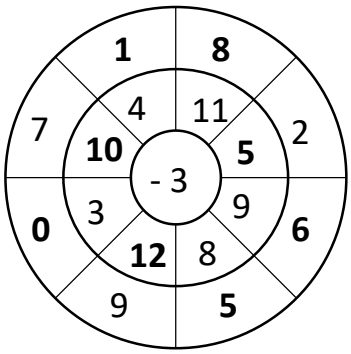
e) 859 **860**

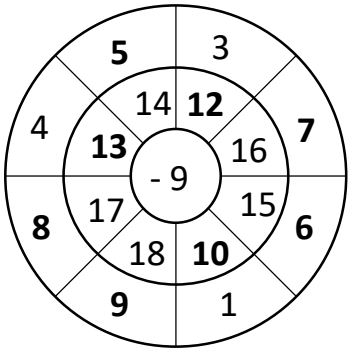
f) 2735 **2740**

Number Correct: _____

2. Subtract the number in the inside circle from the number in the middle circle and write your answer in the space.







Number Correct: _____

3. Apply the rule to the input number to make the output number.

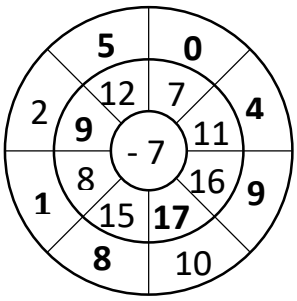
Input	Rule	Output
12	- 7	**5**
14	- 7	**7**
7	- 7	0
9	- 7	**2**
10	- 7	3

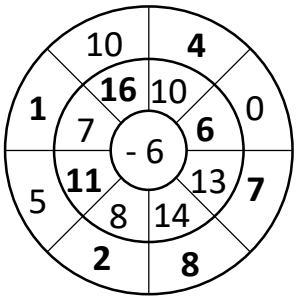
Input	Rule	Output
15	- 6	**9**
10	- 5	5
6	- 5	**1**
8	- 4	4
12	- 4	8

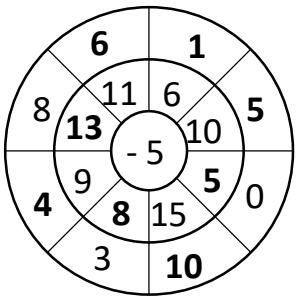
Number Correct: _____

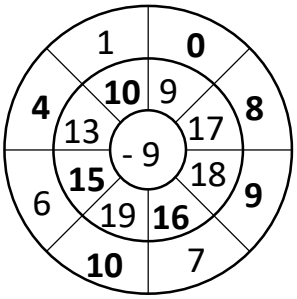
Lesson 23: Four Minute Subtraction Frenzy

Students subtract the number in the inside circle from the number in the middle circle and write their answer in the empty space for 4 minutes. Answers provided in bold below.









Number Correct: _____

Lesson 23 Bingo

Students choose and write 9 of the answer numbers (from the list of 15 answers given in their workbooks) in the squares within their 3x3 grid. Their grid should have all squares filled with 9 different numbers from the list of answers.

Read out the questions in random order from the list of questions on the right without the answers (which are shown in brackets).

Students cross off the numbers in their grid if the number answers the question. The students call out "Bingo" if they have 3 answers crossed out in a row (down, across or diagonally in the grid). First student to call out Bingo wins. You should check that the student does have Bingo. For a longer game, all the squares in the grid could be required to be crossed off to win.

Questions (-7):

13 - 7 [6]
10 - 7 [3]
27 - 7 [20]
9 - 7 [2]
24 - 7 [17]
14 - 7 [7]
8 - 7 [1]
17 - 7 [10]
30 - 7 [23]
11 - 7 [4]
18 - 7 [11]
7 - 7 [0]
15 - 7 [8]
12 - 7 [5]
16 - 7 [9]

Lesson 24: – 8

Addition and Subtraction Facts + 8 and – 8 Students fill in the highlighted ones below			
0 + 8 = 8	8 + 0 = 8	8 – 8 = 0	8 – 0 = 8
1 + 8 = 9	8 + 1 = 9	9 – 8 = 1	9 – 1 = 8
2 + 8 = 10	8 + 2 = 10	10 – 8 = 2	10 – 2 = 8
3 + 8 = 11	8 + 3 = 11	11 – 8 = 3	11 – 3 = 8
4 + 8 = 12	8 + 4 = 12	12 – 8 = 4	12 – 4 = 8
5 + 8 = 13	8 + 5 = 13	13 – 8 = 5	13 – 5 = 8
6 + 8 = 14	8 + 6 = 14	14 – 8 = 6	14 – 6 = 8
7 + 8 = 15	8 + 7 = 15	15 – 8 = 7	15 – 7 = 8
8 + 8 = 16	8 + 8 = 16	16 – 8 = 8	16 – 8 = 8
9 + 8 = 17	8 + 9 = 17	17 – 8 = 9	17 – 9 = 8
10 + 8 = 18	8 + 10 = 18	18 – 8 = 10	18 – 10 = 8
11 + 8 = 19	8 + 11 = 19	19 – 8 = 11	19 – 11 = 8
12 + 8 = 20	8 + 12 = 20	20 – 8 = 12	20 – 12 = 8

Lesson 24 Intention & Language

Lesson Intention

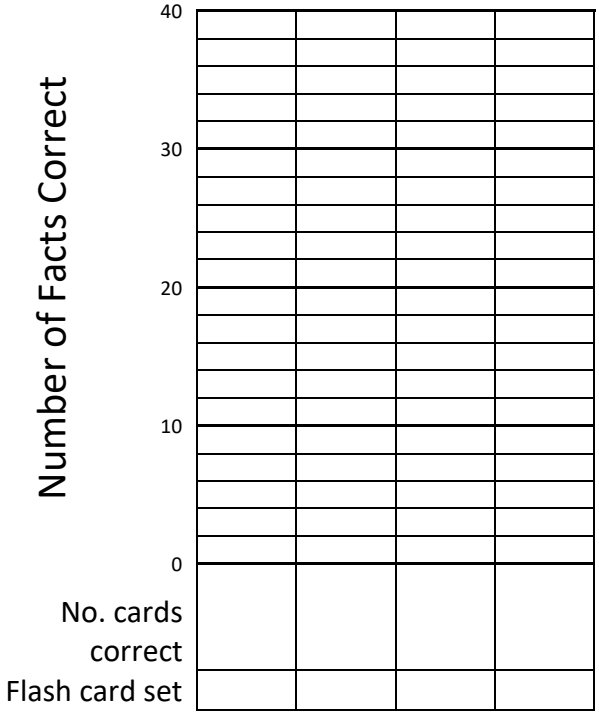
In these Intervention Mathematics lessons, we are looking at the number facts up to 12. Today our focus is on is subtracting 6, 7 and 8. In our earlier lessons today we looked at subtracting 6 and 7. In this lesson our focus is subtracting 8. While students may know these number facts, can they do the questions fast and get the right answers?

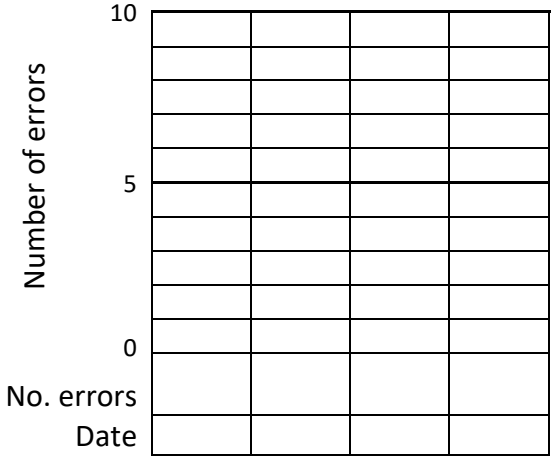
Lesson Language

Estimate, find, value.

Lesson 24 Flash Cards Graph

Students work in groups of 2 or 3 and time each other as they answer as many flash cards as they can in one minute. Flash cards are placed in two piles as answered, based on whether correct or incorrect. Students should graph the number of flash cards they had correct and incorrect for each attempt below (with enough space for up to four attempts).





Lesson 21 Speed Questions (+ & - 8)

Students answer as many as they can in 2 minutes, then read out answers (in []) for students to mark.

9 - 8 = [1]	19 - 8 = [11]	12 - 8 = [4]	20 - 8 = [12]
18 - 8 = [10]	8 + 9 = [17]	6 + 8 = [14]	8 - [8] = 0
8 - [4] = 4	9 - 8 = [1]	9 + 8 = [17]	11 - 8 = [3]
8 - 7 = [1]	8 - [2] = 6	[9] - 8 = 1	8 - 5 = [3]
8 + 6 = [14]	8 + 1 = [9]	[8] - 2 = 6	5 + 8 = [13]
11 - 8 = [3]	9 - 8 = [1]	8 - 7 = [1]	8 + 8 = [16]
[8] - 2 = 6	[10] - 8 = 2	16 - 8 = [8]	[10] - 8 = 2
8 + 3 = [11]	12 - [8] = 4	8 - 8 = [0]	9 - [8] = 1
[8] - 3 = 5	[8] - 6 = 2	10 - [8] = 2	8 - 3 = [5]
8 - [6] = 2	8 - 3 = [5]	8 - [4] = 4	[12] - 8 = 4

Number Correct _____ Number of Errors _____

Lesson 24 Work Sheet

Answers are shown in bold below for students to mark their work.

1. Round to the nearest ten.

a) 53 **50**

b) 86 **90**

c) 541 **540**

d) 7453 **7450**

e) 748 **750**

f) 1935 **1940**

Number Correct: _____

2. Use the numbers 1 to 10 to fill the empty cells so that the sum of each horizontal block of cells equals the clue number on its left, and the sum of each vertical block the number on top. Each number can only be used once per block.

	12	14
11	**5**	**6**
15	**7**	8

	15	9
11	8	**3**
13	**7**	**6**

	9	17
15	**7**	8
11	**2**	**9**

Number Correct: _____

3. Place the numbers 1 to 9 in the 3 by 3 grid so that each horizontal and vertical line adds up to the given sum. You can only use each number once. Some numbers are already placed for you.

3	2	**5**	10
8	1	**9**	18
4	**7**	6	17
15	10	20	

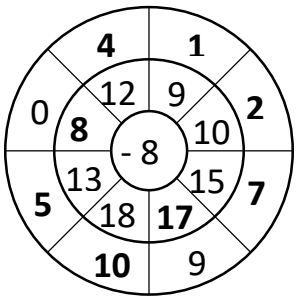
7	**1**	8	16
2	5	**4**	11
6	**9**	3	18
15	15	15	

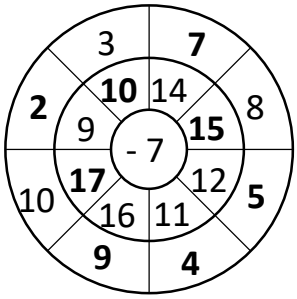
7	**9**	**5**	21
6	8	**3**	17
4	1	2	7
17	18	10	

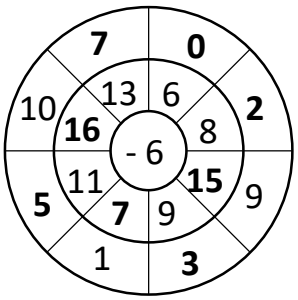
Number Correct: _____

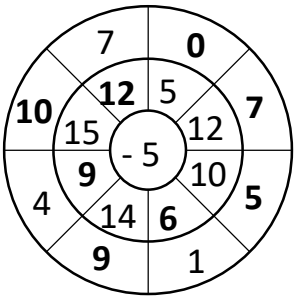
Lesson 24: Four Minute Subtraction Frenzy

Students subtract the number in the inside circle from the number in the middle circle and write their answer in the empty space for 4 minutes. Answers provided in bold below.









Number Correct: _____

Lesson 24 Reflection & Metacognition

Students answer the questions below.

What did you learn today?

_____

_____

_____

What were your improvements today?

_____

_____

_____

How confident do you feel about today's focus topic of subtracting 6, 7 and 8 after today's lessons? Circle one below:

			
I am not sure/confused about this topic	I have some questions about this topic	I think I can do this topic	I am sure I can do this topic

Lesson 25: – 12

Addition and Subtraction Facts + 12 and – 12 Students fill in the highlighted ones below			
0 + 12 = 12	12 + 0 = 12	12 – 12 = 0	12 – 0 = 12
1 + 12 = 13	12 + 1 = 13	13 – 12 = 1	13 – 1 = 12
2 + 12 = 14	12 + 2 = 14	14 – 12 = 2	14 – 2 = 12
3 + 12 = 15	12 + 3 = 15	15 – 12 = 3	15 – 3 = 12
4 + 12 = 16	12 + 4 = 16	16 – 12 = 4	16 – 4 = 12
5 + 12 = 17	12 + 5 = 17	17 – 12 = 5	17 – 5 = 12
6 + 12 = 18	12 + 6 = 18	18 – 12 = 6	18 – 6 = 12
7 + 12 = 19	12 + 7 = 19	19 – 12 = 7	19 – 7 = 12
8 + 12 = 20	12 + 8 = 20	20 – 12 = 8	20 – 8 = 12
9 + 12 = 21	12 + 9 = 21	21 – 12 = 9	21 – 9 = 12
10 + 12 = 22	12 + 10 = 22	22 – 12 = 10	22 – 10 = 12
11 + 12 = 23	12 + 11 = 23	23 – 12 = 11	23 – 11 = 12
12 + 12 = 24	12 + 12 = 24	24 – 12 = 12	24 – 12 = 12

Lesson 25 Intention & Language

Lesson Intention

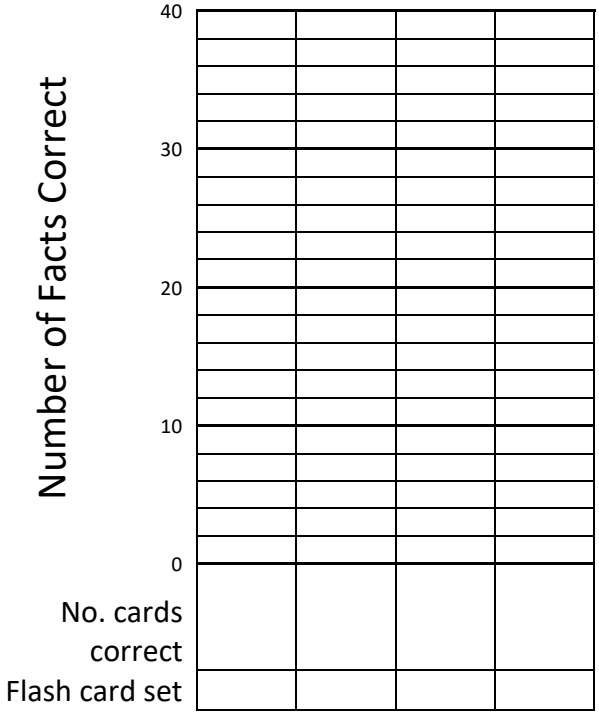
In these Intervention Mathematics lessons, we are looking at the number facts up to 12. Today our focus is on is subtracting numbers from 0 to 12 and applying the number facts. In this lesson our focus is subtracting 12. While students may know these number facts, can they do the questions fast and get the right answers?

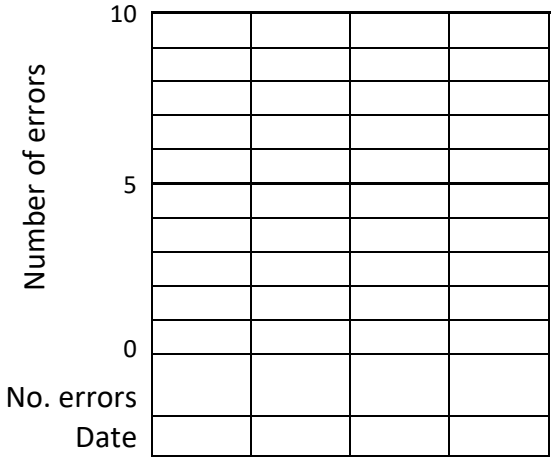
Lesson Language

Determine, evaluate, assess.

Lesson 25 Flash Cards Graph

Students work in groups of 2 or 3 and time each other as they answer as many flash cards as they can in one minute. Flash cards are placed in two piles as answered, based on whether correct or incorrect. Students should graph the number of flash cards they had correct and incorrect for each attempt below (with enough space for up to four attempts).





Lesson 25 Speed Questions (+ & - 12)

Students answer as many as they can in 2 minutes, then read out answers (in []) for students to mark.

15 − 12 = [3]	24 − 12 = [12]	12 − 9 = [3]	23 − 12 = [11]
13 − 12 = [1]	6 + 12 = [18]	12 − 12 = [0]	12 + 2 = [14]
10 + 12 = [22]	[12] − 7 = 5	12 − [9] = 3	12 − [5] = 7
18 − 12 = [6]	12 − [3] = 9	22 − 12 = [10]	[13] − 1 = 12
12 − [5] = 7	[12] − 0 = 12	4 + 12 = [16]	19 − 12 = [7]
[12] - 10 = 2	14 − 12 = [2]	12 − [4] = 8	23 − 11 = [12]
12 − [11] = 1	12 − [6] = 6	[21] − 9 = 12	20 − 12 = [8]
16 − 12 = [4]	12 − 2 = [10]	7 + 12 = [19]	[12] − 2 = 10
5 + 12 = [17]	8 + 12 = [20]	[12] − 2 = 10	12 + 12 = [24]
[12] − 4 = 8	17 − 12 = [5]	21 − 12 = [9]	12 − [12] = 0

Number Correct _____ Number of Errors _____

Lesson 25 Work Sheet

Answers are shown in bold below for students to mark their work.

1. Round to the nearest ten.

a)	14	**10**	d)	185	**190**
b)	5120	**5120**	e)	2238	**2240**
c)	23683	**23680**	f)	34	**30**

Number Correct: _____

2. Fill in the squares. Subtract across and down.

22	11	**11**
12	8	**4**
10	**3**	

19	12	**7**
9	6	**3**
10	**6**	

19	12	**7**
5	4	**1**
14	**8**	

Number Correct: _____

3. Use the digits 0 to 9 to fill the cells in the grid. The columns must add up to the given sums at the bottom. You must use all the digits 0 to 9 in each row, but digits may be repeated in columns. The digits in connecting unshaded cells (also diagonally) must be different.

a)

2	**3**	**6**	5	**8**	7	4	1	0	**9**
8	0	**7**	**4**	**9**	**1**	**5**	**3**	6	2
10	3	13	9	17	8	9	4	6	11

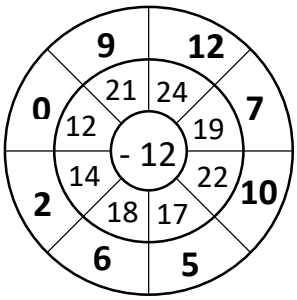
b)

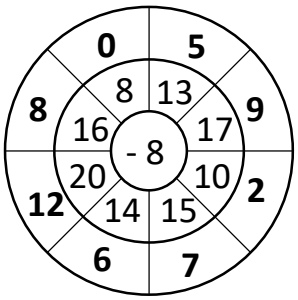
6	8	**7**	9	**5**	**4**	**3**	**1**	**0**	**2**
0	5	**1**	3	**6**	9	7	2	**4**	8
6	13	8	12	11	13	10	3	4	10

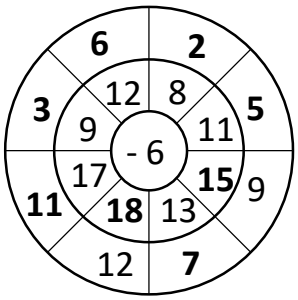
Number Correct: _____

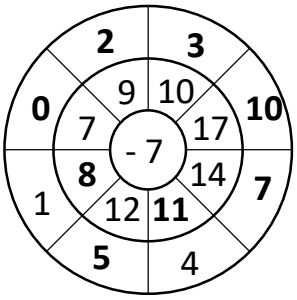
Lesson 25: Four Minute Subtraction Frenzy

Students subtract the number in the inside circle from the number in the middle circle and write their answer in the empty space for 4 minutes. Answers provided in bold below.









Number Correct: _____

Lesson 25 Bingo

Students choose and write 9 of the answer numbers (from the list of 15 answers given in their workbooks) in the squares within their 3x3 grid. Their grid should have all squares filled with 9 different numbers from the list of answers.

Read out the questions in random order from the list of questions on the right without the answers (which are shown in brackets).

Students cross off the numbers in their grid if the number answers the question. The students call out "Bingo" if they have 3 answers crossed out in a row (down, across or diagonally in the grid). First student to call out Bingo wins. You should check that the student does have Bingo. For a longer game, all the squares in the grid could be required to be crossed off to win.

Questions (-12):

14 - 12 [2]
24 - 12 [12]
16 - 12 [4]
27 - 12 [15]
15 - 12 [3]
18 - 12 [6]
20 - 12 [8]
12 - 12 [0]
23 - 12 [11]
19 - 12 [7]
17 - 12 [5]
21 - 12 [9]
22 - 12 [10]
13 - 12 [1]
30 - 12 [18]

Lesson 26: All subtraction

Addition and Subtraction Facts + and – 0 to 12 Students fill in the highlighted ones below			
0 + 4 = 4	4 + 0 = 4	4 – 4 = 0	4 – 0 = 4
1 + 5 = 6	5 + 1 = 6	6 – 5 = 1	6 – 1 = 5
2 + 2 = 4	2 + 2 = 4	4 – 2 = 2	4 – 2 = 2
3 + 9 = 12	9 + 3 = 12	12 – 9 = 3	12 – 3 = 9
4 + 12 = 16	12 + 4 = 16	16 – 12 = 4	16 – 4 = 12
5 + 3 = 8	3 + 5 = 8	8 – 3 = 5	8 – 5 = 3
6 + 1 = 7	1 + 6 = 7	7 – 1 = 6	7 – 6 = 1
7 + 6 = 13	6 + 7 = 13	13 – 6 = 7	13 – 7 = 6
8 + 10 = 18	10 + 8 = 18	18 – 10 = 8	18 – 8 = 10
9 + 0 = 9	0 + 9 = 9	9 – 0 = 9	9 – 9 = 0
10 + 7 = 17	7 + 10 = 17	17 – 7 = 10	17 – 10 = 7
11 + 11 = 22	11 + 11 = 22	22 – 11 = 11	22 – 11 = 11
12 + 8 = 20	8 + 12 = 20	20 – 8 = 12	20 – 12 = 8

Lesson 26 Intention & Language

Lesson Intention

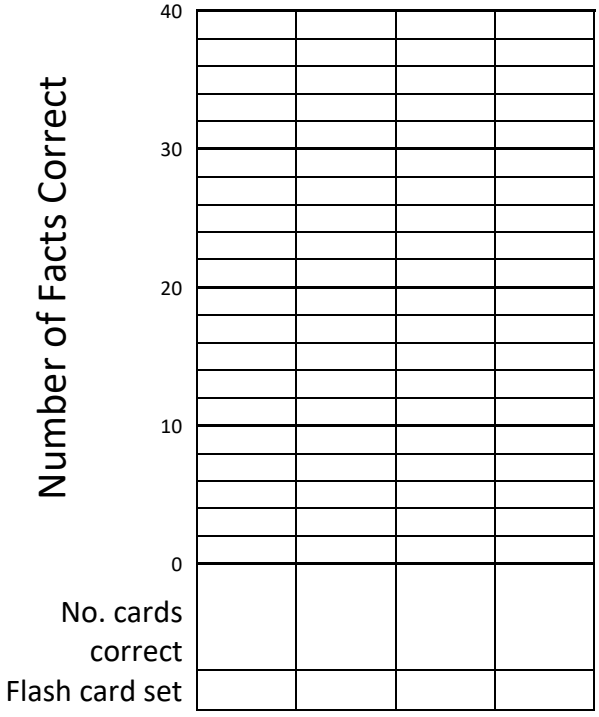
In these Intervention Mathematics lessons, we are looking at the number facts up to 12. Today our focus is on is subtracting numbers from 0 to 12 and applying the number facts. In this lesson our focus is subtracting numbers from 0 to 12. While students may know these number facts, can they do the questions fast and get the right answers?

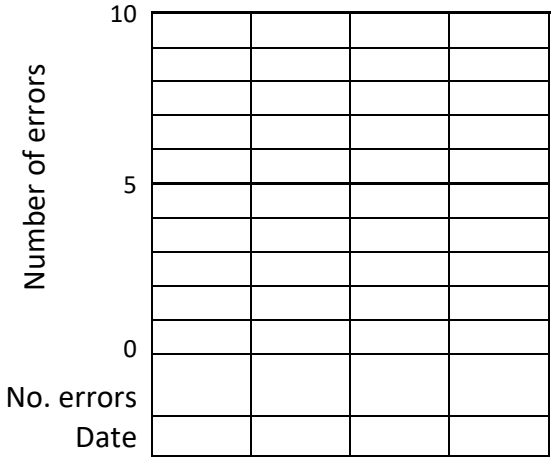
Lesson Language

Subtract, minus, take away, subtraction, difference, decrease.

Lesson 26 Flash Cards Graph

Students work in groups of 2 or 3 and time each other as they answer as many flash cards as they can in one minute. Flash cards are placed in two piles as answered, based on whether correct or incorrect. Students should graph the number of flash cards they had correct and incorrect for each attempt below (with enough space for up to four attempts).





Lesson 26 Speed Questions (All + & -)

Students answer as many as they can in 2 minutes, then read out answers (in []) for students to mark.

7 - 3 = [4]	11 - 8 = [3]	2 - 1 = [1]	18 - 9 = [9]
7 - 0 = [7]	9 - 5 = [4]	11 - 4 = [7]	7 - 6 = [1]
11 - 0 = [11]	7 - 3 = [4]	5 + 10 = [15]	8 + 10 = [18]
5 - [3] = 2	12 - [2] = 10	11 + 0 = [11]	6 - 2 = [4]
10 - [6] = 4	3 - [2] = 1	[3] - 0 = 3	3 - [1] = 2
[4] - 4 = 0	12 + 3 = [15]	9 - [2] = 7	12 + 6 = [18]
[12] - 6 = 6	0 + 10 = [10]	8 - [0] = 8	[8] - 4 = 4
4 + 11 = [15]	[9] - 2 = 7	7 - 1 = [6]	[17] - 8 = 9
0 + 8 = [8]	[5] - 2 = 3	11 - 9 = [2]	13 - 6 = [7]
9 - 8 = [1]	17 - 7 = [10]	[7] - 6 = 1	23 - [12] = 11

Number Correct _____ Number of Errors _____

Lesson 26 Work Sheet

Answers are shown in bold below for students to mark their work.

1.

a. Start at 115 and subtract 10 five times

115 **105 95 85 75 65**

b. Start at 358 and subtract 50 five times

358 **308 258 208 158 108**

c. Start at 180 and subtract 40 five times

280 **240 200 160 120 80**

d. Start at 235 and add 20 five times

235 **215 195 175 155 135**

Number Correct: _____

2. Fill in the squares. Subtract across and down.

20	18	**2**
7	1	**6**
13	**17**	

15	11	**4**
8	0	**8**
7	**11**	

14	10	**4**
4	2	**2**
10	**8**	

17	13	**4**
10	6	**4**
7	**7**	

19	14	**5**
9	5	**4**
10	**9**	

17	12	**5**
9	3	**6**
8	**9**	

Number Correct: _____

3. Apply the rule to the input number to make the output number.

Input	Rule	Output
12	- 9	**3**
14	- 5	**9**
0	- 0	0
11	- 2	**9**
7	- 4	3

Input	Rule	Output
15	- 9	**6**
10	- 3	7
16	- 10	**6**
12	- 8	4
15	- 7	8

Number Correct: _____

Lesson 26: Four Minute Subtraction Frenzy

Students subtract the numbers on the row from the numbers in the column.
for 4 minutes. The first two are done. Answers provided in the squares below.

-	**21**	**12**	**24**	**14**	**18**	**20**	**23**	**19**	**13**	**15**	**16**	**17**	**22**
1	**20**	**11**	23	13	17	19	22	18	12	14	15	16	21
10	11	2	14	4	8	10	13	9	3	5	6	7	12
5	16	7	19	9	13	15	18	14	8	10	11	12	17
11	10	1	13	3	7	9	12	8	2	4	5	6	11
8	13	4	16	6	10	12	15	11	5	7	8	9	14
3	18	9	21	11	15	17	20	16	10	12	13	14	19
6	15	6	18	8	12	14	17	13	7	9	10	11	16
0	21	12	24	14	18	20	23	19	13	15	16	17	22
12	9	0	12	2	6	8	11	7	1	3	4	5	10
9	12	3	15	5	9	11	14	10	4	6	7	8	13
7	14	5	17	7	11	13	16	12	6	8	9	10	15

Number Correct: _____

Lesson 26 Bingo

Students choose and write 9 of the answer numbers (from the list of 15 answers given in their workbooks) in the squares within their 3x3 grid. Their grid should have all squares filled with 9 different numbers from the list of answers.

Read out the questions in random order from the list of questions on the right without the answers (which are shown in brackets).

Students cross off the numbers in their grid if the number answers the question. The students call out “Bingo” if they have 3 answers crossed out in a row (down, across or diagonally in the grid). First student to call out Bingo wins. You should check that the student does have Bingo. For a longer game, all the squares in the grid could be required to be crossed off to win.

Questions (Subtraction):

9 - 2 [7]
12 - 9 [3]
13 - 7 [6]
6 - 6 [0]
19 - 10 [9]
5 - 1 [4]
22 – 11 [11]
8 - 0 [8]
17 – 3 [14]
8 - 3 [5]
15 - 5 [10]
25 - 12 [13]
7 - 6 [1]
20 - 8 [12]
7 – 5 [2]

Lesson 27: Problem Solving

Lesson 27 Short Questions

Students complete these questions which involve numbers which will be used within the scenario during the lesson, with answers shown in bold below.

1. 5 + 5 = **10**
2. 200 + 200 = **400**
3. 250 + 250 = **500**
4. 1000 - 600 = **400**
5. 150 + 150 = **300**
6. 500 + 500 = **1000**
7. 400 + 400 = **800**
8. 150 + 300 = **450**
9. 500 + 300 = **800**
10. 900 - 800 = **100**
11. 150 + 600 = **750**
12. 450 - 400 = **50**

Lesson 27 Intention & Language

Lesson Intention

In these Intervention Mathematics lessons, we are looking at the number facts up to 12. Today our focus is on subtracting numbers from 0 to 12 and applying the number facts. In our earlier lessons today, we looked at subtracting numbers from 0 to 12. In this lesson our focus is on applying the number facts to solve worded questions. While students may know the number facts, can they apply these to real life situations and get the right answers?

Lesson Language

Kilogram, kg, per, gram, g, shop.

Lesson 27 Part A: Scenario

Fruit Shopping

You are going to the shop to buy fruit. The following are the prices of different fruit at the shop.

Mangoes	₱200/kg
Bananas	₱150/kg
Pineapples	₱250 each
Strawberries	₱200 per 250g pack
Fuji Apples	₱150/kg
Kiwifruit	₱150 for 3 pieces of fruit

Lesson 27 Part B: Questions

Students attempt these questions related to the scenario above, with answers in bold below.

a) If you buy 1 kg of bananas and 3 kg of mangoes, how much money do you have to pay?

Bananas are ₱150/kg and Mangoes are ₱200/kg

Cost = 1 kg at ₱150/kg + 3 kg at ₱200/kg
= ₱150 + ₱200 + ₱200 + ₱200
= ₱750

You would need to pay ₱750 for the 1 kg of bananas and 3 kg of mangoes.

b) If there are about 5 bananas in a kilogram of bananas, how much would it cost to buy 10 bananas?

Bananas are ₱150/kg, with 5 bananas in a kg. As 5 + 5 = 10, 2 kg of bananas need to be purchased.

Cost = 2 lots of 5 bananas at a cost of ₱150 for 5 bananas
= ₱150 + ₱150
= ₱300

The cost of 10 bananas is ₱300.

c) How much will one kilogram of strawberries cost?

Strawberries are sold in 250g packs. There are 4 packs per kg (as 250g + 250g + 250g + 250g = 1000g = 1kg).

Cost = 4 packs at ₱200/pack
= ₱200 + ₱200 + ₱200 +₱200
= ₱800

So strawberries are ₱800/kg.

Lesson 27 Part C: Questions

Students attempt these questions related to the scenario, with answers in bold below.

a) Which would cost more: 3 kg of apples or 2 kg of mangoes?

Apples are ₱150/kg and Mangoes are ₱200/kg.

Cost for 3 kg of apples	**=**	**3 kg at ₱150/kg**
	=	**₱150 + ₱150 + ₱150**
	=	**₱450**
Cost for 2 kg of mangoes	**=**	**2 kg at ₱200/kg**
	=	**₱200 + ₱200**
	=	**₱400**

3 kg of apples would be ₱450, so costs more than 2 kg of mangoes, which would be ₱400.

b) If you have ₱900, would you have enough money to buy 6 kiwifruit and 2 pineapples?

Kiwifruit are ₱150 for 3 pieces of fruit and Pineapples are ₱250 each.

Cost for 6 kiwifruit	**=**	**2 lots of 3 pieces of kiwifruit at a cost of ₱150 for 3 pieces**
	=	**₱150 + ₱150**
	=	**₱300**
Cost for 2 pineapples	**=**	**2 pineapples at cost of ₱250 for one pineapple**
	=	**₱250 + ₱250**
	=	**₱500**
Total cost	**=**	**₱300 + ₱500**
	=	**₱800**

₱900 is more than ₱800, therefore you have enough money to buy 6 kiwifruit and 2 pineapples.

c) How much money would you have left from ₱1000 if you buy 3 kiwifruit, 1 pineapple and a 250g pack of strawberries?

Kiwifruit are ₱150 for 3 pieces, Strawberries are ₱200 per 250g pack, and Pineapples are ₱250 each.

Total cost	**=**	**₱150 + ₱200 + ₱250**
	=	**₱600**
Money left	**=**	**₱1000 - ₱600**
	=	**₱400**

So you would have ₱400 left.

Lesson 27 Reflection & Metacognition

Students answer the survey questions. Hand out and collect the responses.

For inquiries or feedback, please write or call:

Department of Education - Bureau of Learning Delivery (DepEd-BLD)
Contact Numbers: 8637-4366; 8637-4347; 8633-9347

Department of Education - Bureau of Learning Resources (DepEd-BLR)
Contact Numbers: 8634-1072; 8631-6922

Email Address: blr.od@deped.gov.ph

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