3

NATIONAL LEARNING CAMP

DepED DEPARTMENT OF EDUCATION

Mathematics

Enhancement Camp

Lesson Plans

Enhancement Camp

Lesson Plans

Mathematics Grade 3

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Mathematics Grade 3

MATHEMATICS Grade 3 Lesson Plan #1

Key Idea

Even numbers are numbers that can be divided exactly by 2. Even numbers end in 0, 2, 4, 6, 8.

Odd numbers are numbers that cannot be exactly divided by 2. Odd numbers end in 1, 3, 5, 7, 9.

Learning about odd and even numbers is important because it plays a big role in future math skills.

Most Essential Learning Competencies

- identifies odd and even numbers. M3NS-IIIa-63

Component 1: *Lesson Short Review*

Time: 5 mins.

1. Remember when you skipped counting by 2? List down the numbers that you got when you skipped counting by 2 starting from 0 until 30.
   Answer: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30
2. All the numbers you listed above and all the numbers you will get after 30 when you skip count by 2 can all be divided exactly by 2!
3. Choose any three of the numbers you listed, then divide that number by 2.
   Example: 10 ÷ 2 = 5
4. What did you find out?
5. List down all the numbers from 1 to 30 that you did not list above.
   Answer: 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29
6. Choose any three of the numbers you listed, then divide that number by 2.
   Example: 9 ÷ 2 = 4 remainder 1
7. What did you find out?

Component 2: ***Lesson Purpose/Intention***

Time: 5 mins.

The purpose of this lesson aims to helps Grade 3 learners identify odd and even numbers through the following:

1. Number sense: Identifying odd and even numbers help learners develop a deeper understanding of number patterns and sequences. It allows them to group numbers based on common features, which is a crucial foundation for future math concepts.

2. Classification: Sorting objects and numbers into categories like "even" and "odd" introduces basic classification skills, which are essential for problem-solving in various domains.

3. Skip counting: Learning about even and odd numbers lays the groundwork for skip counting by 2s, a valuable skill for addition, subtraction, and multiplication.

4. Divisibility: Recognizing even numbers (divisible by 2) and odd numbers (not divisible by 2) forms the basis for understanding divisibility rules, a key concept in division and other operations.

5. Reasoning and logic: By analyzing patterns and rules related to odd and even numbers, students develop logical reasoning skills that are transferable to other mathematical problems.

6. Problem-solving: The concept of odd and even numbers can be applied to real-world scenarios, like sharing objects equally, counting items in pairs, or analyzing patterns in nature.

7. Critical thinking: Recognizing odd and even number encourages students to question, compare, and contrast, developing critical thinking skills valuable in various contexts.

Let the learners answer the Activity on the worksheet.

Component 3: *Lesson Language Practice*

Time: 5 mins.

- Read out difficult or unfamiliar words or phrases and ask the students to read them to themselves and then out loud as a class.
  Even numbers – are numbers that can be divided into two equal parts.
  Even numbers end in 0, 2, 4, 6, 8 in the ones place.
  Odd numbers – are numbers that cannot be divided into two equal parts.
  Odd numbers end in 1, 3, 5, 7, 9 in the ones place.
  Remainder – number that is left after you divide.
  Divisibility – means that a number goes evenly (with no remainder) into a number.

- Read out the terms and ask learners to read them to themselves and then out loud as a class.

Component 4*: Lesson Activity*

Time: 25 mins.

Component 4A

- Refer learners to the main lesson stimulus and read out the text.
- Say: Read the text.

Here are the two groups of numbers:

Set A	**Set B**
Odd Numbers 1, 3, 5, 7, 9, 11, 15, 17, 19, 21, 23, 25, 27, 29	**Even Numbers** 0, 2, 4, 6, 8, 10, 12, 14 16, 18, 20, 22, 24, 26, 28

Numbers in set B can be divided exactly by 2 without any remainder. These are even numbers. Even numbers end in 0, 2, 4, 6, 8 in the ones place.

Examples: 1<u>4</u>, 15<u>6</u>, 20<u>2</u>, 50<u>0</u>, 1 49<u>8</u>

Numbers in set A give a remainder of 1 when divided by 2. These are odd numbers. Odd numbers end in either 1, 3, 5, 7, and 9 in the ones place.

Examples: 1<u>1</u>, 25<u>3</u>, 49<u>5</u>, 5 18<u>7</u>, 9 99<u>9</u>

- Ask learners if there are words that they are not familiar with and give descriptions of any words that may be problematic.

Component 4B

- Say: Read the following questions and provide answers on a separate sheet of paper.
  Q1. Is the number **8 231** odd or even? Why?

  Q2. Is the number **2 818** odd or even? Why?

  Q3. What kind of sum (even or odd) do you get when you add two even numbers?

  Give 3 examples to prove it.

  Q4. What kind of sum (even or odd) do you get when you add two odd numbers?

  Give 3 examples to prove it.

  Q5. What kind of sum (even or odd) do you get when you add an even and an odd number?

  Give 3 examples to prove it.

  Q6. What pattern do you notice when you get into the sums of numbers?

  Summarize your observation.

- Observe learners' answers. Ask learners to volunteer their answers, giving positive feedback.
- Select a sample answer for all learners to write down. This may come from one of the learners or from the following sample answers.

Sample answers:

Q1. Odd Number. Because ends in 1 in the ones place and cannot be divided exactly by 2
Q2. Even Number. Because ends in 8 in the ones place and can be divided exactly by 2.
Q3. Even Numbers. Examples: 6 + 8 = 14, 26 + 10 = 36, 390 + 500 = 890
Q4. Even Numbers. Examples: 1 + 9 = 10, 37 + 11 = 48, 291 + 305 = 596
Q5. Odd Numbers. Examples: 1 + 2 = 3, 37 + 40 = 77, 595 + 100 = 695
Q6. a. Even + Even = Even b. Odd + Odd = Even c. Odd + Even = Odd

Try These:

Roll, Add, and Swift Game

This game not only reinforces the concept but also adds an element of excitement and challenge to learning.

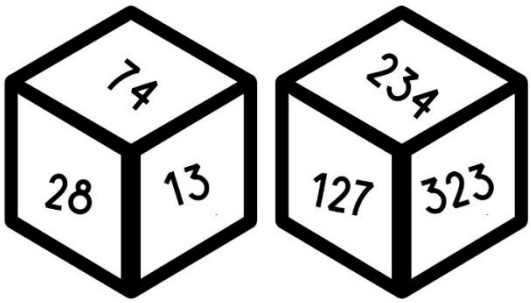
Directions:

-The class will be divided into three groups.

- Members take turns rolling the dice twice and adding the numbers together.

-They will determine if the sum is odd or even.

-The group that gets the highest correct answer wins the game.



Component 4C

Group Activity

- A. Say: Read the following questions and answer them on their worksheet.

  Q1. Write the even numbers between 11 and 20.

  Q2. Write odd numbers between 20 and 30.

  Q3. Write the 2 consecutive even numbers whose sum is 28.

  Q4. Write the 5 smallest three-digit odd numbers.

  Q5. Write the 5 largest two-digit even numbers.

Sample answers:

Q1. The even numbers are 12, 14, 16, and 18.

Q2. The odd numbers are 21, 23, 25, 27, and 29.

Q3. The 2 consecutive even numbers are 14 and 16.

Q4. The numbers are 101, 103, 105, 107, and 109.

Q5. The numbers are 90, 92, 94, 96, and 98.

- B. Have learners read the following expression to see if it gives out an even or odd numbers? Let them answer on their worksheet.

Q1. Number of years in a decade
Q2. Number of months in a year
Q3. Number of objects in 2 dozen
Q4. Number of days in a week
Q5. Number of days in February when it is a leap year

Sample answers:

*Q1.*10 - Even number

*Q2.*12 - Even number

Q3. 24 - Even Number

Q4. 7 – Odd number

Q5. 29 – Odd number

- Walk around, giving encouragement and looking at learners' answers. Give positive feedback.
- Select a sample answer for all learners to write down for each question. This may come from one of the learners or from the following sample answers.

Component 5: Lesson Conclusion

Time: 5 mins.

- The focus of teaching odd and even numbers serves as a stepping stone for building a strong foundation in mathematics. It equips students with essential skills for further learning, problem-solving, and even navigating real-world situations.

- Say: Answer the following questions and write your answers on your answer sheet.

  Q1. What is an even number? Odd number?

  Q2. Can you explain when we say that a number is odd or even?

  Q3. What new concepts or skills do you learn about during this lesson?

  Q4. Did collaborating with your classmates help you understand the lesson? How?

Reflection:

Q5. If numbers are grouped according to qualities, should people be grouped based on qualities too? Why or why not?

Segue to the next lesson: In the next lesson, we will learn and enjoy the lesson about fractions.

- Let learners know that good learners reflect on their learning.

REMINDER: Collect learners' worksheets / answer sheets to review and analyze their learning.

Mathematics Grade 3 Lesson Plan #2

Visualizes, represents, and arranges dissimilar fractions in increasing order or decreasing order.

Key Idea

- How do we compare fractions?
  - Look at how the figures or shapes are arranged and identify which shape/s repeat over and over.
  - Identify the order of the repeated figures.

- Discuss the steps in arranging dissimilar fractions.
  - Find the least common denominator.
  - Determine the equivalent fractions sharing the LCD.
  - Arrange the numerators in increasing or decreasing order.
  - Rewrite the fractions.

Most Essential Learning Competencies

- Visualizes, represents, and arranges dissimilar fractions in increasing order or decreasing order.

Component 1: *Lesson Short Review*

Time: (3 mins.)

- When comparing fractions, remember that the numerator is the top number and the denominator is the bottom number. With the same denominator, the larger numerator means a larger fraction. With the same numerator, the smaller denominator means a larger fraction. Two fractions can be equivalent even with different numerators and denominators.

Compare the following fractions using <, >, or =.

1. $\frac{3}{3}$ ___ $\frac{1}{3}$
2. $\frac{1}{2}$ ___ $\frac{2}{10}$
3. $\frac{2}{2}$ ___ $\frac{2}{8}$
4. $\frac{5}{7}$ ___ $\frac{4}{9}$
5. $\frac{4}{7}$ ___ $\frac{6}{9}$

Call on volunteers to give their answers.

Answers:

1. >

2. >

3. >

4. >

5. <

Component 2: ***Lesson Purpose/Intention***

Time: (7 mins.)

Slice a pizza, and we get fractions:

$\frac{1}{2}$ $\frac{1}{4}$ $\frac{3}{8}$

The top number says how many slices we have.

The bottom number says how many equal slices the whole pizza was cut into.

A. Now, arrange the following and write your answer on the answer sheet.

1. $\frac{1}{2}$, $\frac{1}{4}$, $\frac{3}{8}$ ⟶ ascending order.

2. $\frac{1}{2}$, $\frac{1}{4}$, $\frac{3}{8}$ ⟶ descending order

B. Let us arrange the fractions $\frac{5}{16}$, $\frac{9}{16}$, $\frac{8}{16}$ and $\frac{7}{16}$ in ascending order.

We know that the above fractions are similar fractions. We can arrange them in ascending order by comparing the numerators of each fraction.

C. Linda is measuring sugar for the three kinds of pastries she will bake.

$\frac{2}{3}$ cups for the egg pie

$\frac{3}{4}$ cups for the chocolate cake

$\frac{1}{2}$ cups for the banana cake

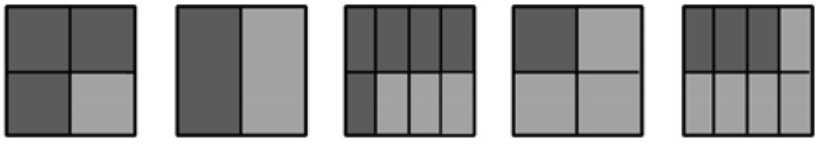
Which recipe calls for the greatest amount of sugar?

Component 3: *Lesson Language Practice*

Time: (5 mins.)

- Ascending order means the smallest, or first, or earliest in the order will appear at the top of the list.
- Descending order means the largest or last in the order will appear at the top of the list.

1. Write these fractions in ascending order:



$\frac{3}{4}$ $\frac{1}{2}$ $\frac{5}{8}$ $\frac{1}{4}$ $\frac{3}{8}$

Answer:

$\frac{1}{4}$ $\frac{3}{8}$ $\frac{1}{2}$ $\frac{5}{8}$ $\frac{3}{4}$

2. Arrange the fractions $\frac{3}{5}, \frac{2}{3}, \frac{4}{7}$ in descending order.

Answer:

$\frac{2}{3}$ $\frac{3}{5}$ $\frac{4}{7}$

3. Arrange the following fractions in descending order of magnitude.

$\frac{3}{4}$ $\frac{5}{8}$ $\frac{4}{6}$ $\frac{2}{9}$

LCM of 4, 8, 6 and 9

= 2 × 2 × 3 × 2 × 3 = 72

Answer:

$\frac{54}{72}$ $\frac{48}{72}$ $\frac{45}{72}$ $\frac{16}{72}$

$\frac{3}{4}$ $\frac{4}{6}$ $\frac{5}{8}$ $\frac{2}{9}$

Component 4*: Lesson Activity*

Time: (25 mins.)

Activity 4A

1. Arrange the following fractions in ascending order: $\frac{17}{3}, \frac{17}{11}, \frac{17}{9}, \frac{17}{15}$.

a) $\frac{17}{15}\ \frac{17}{11}\ \frac{17}{9}\ \frac{17}{3}$

b) $\frac{17}{11}\ \frac{17}{15}\ \frac{17}{19}\ \frac{17}{3}$

c) $\frac{17}{15}\ \frac{17}{11}\ \frac{17}{9}\ \frac{17}{3}$

d) $\frac{17}{3}\ \frac{17}{11}\ \frac{17}{9}\ \frac{17}{15}$

Answer: a) $\frac{17}{15}\ \frac{17}{11}\ \frac{17}{9}\ \frac{17}{3}$

Explanation: For fractions with the same numerators:

a. A fraction with the smallest denominator is the greatest fraction.

b. A fraction with the greatest denominator is the smallest fraction.

So, an ascending order of the fraction is $\frac{17}{15}\ \frac{17}{11}\ \frac{17}{9}\ \frac{17}{3}$.

2-3. Arrange the given terms in ascending and descending order by using the like fraction method.

$\frac{13}{4}\ \frac{15}{6}\ \frac{9}{8}\ \frac{21}{9}\ \frac{16}{5}\ \frac{32}{3}$

Ascending order = $\frac{9}{8}\ \frac{21}{9}\ \frac{15}{6}\ \frac{16}{5}\ \frac{13}{4}\ \frac{21}{3}$

Descending order = $\frac{21}{3}\ \frac{13}{4}\ \frac{16}{5}\ \frac{15}{6}\ \frac{21}{9}\ \frac{9}{8}$

Activity 4B

1. There are four different fractions: $\frac{3}{4}\ \frac{5}{6}\ \frac{1}{3}\ \frac{2}{5}$. Arrange these fractions in descending order.

a) $\frac{5}{6}\ \frac{1}{3}\ \frac{2}{5}\ \frac{3}{4}$

b) $\frac{5}{6}\ \frac{3}{4}\ \frac{1}{3}\ \frac{2}{5}$

c) $\frac{5}{6}\ \frac{2}{5}\ \frac{3}{4}\ \frac{1}{3}$

d) $\frac{5}{6}\ \frac{3}{4}\ \frac{2}{5}\ \frac{1}{3}$

Answer: d) $\frac{5}{6}\ \frac{3}{4}\ \frac{2}{5}\ \frac{1}{3}$

Explanation: We find a common denominator by using the LCM method.

The LCM of denominators 4, 6, 3, and 5 is 60.

We find equivalent fractions.

$\frac{3}{4} = (\frac{3}{5}) \times (\frac{15}{15}) = \frac{45}{60}$

$\frac{5}{6} = (\frac{5}{6}) \times (\frac{10}{10}) = \frac{50}{60}$

$\frac{1}{3} = (\frac{1}{3}) \times (\frac{20}{20}) = \frac{20}{60}$

$\frac{2}{5} = (\frac{2}{5}) \times (\frac{12}{12}) = \frac{24}{60}$

Order the following fractions from least to greatest.

2. $\frac{10}{4}\ \frac{4}{6}\ \frac{4}{8}$
3. $\frac{9}{14}\ \frac{9}{10}\ \frac{9}{16}$
4. $\frac{4}{12}\ \frac{4}{9}\ \frac{4}{10}$
5. $\frac{3}{7}\ \frac{1}{14}\ \frac{2}{6}$

Answer:

2. $\frac{4}{8}\ \frac{4}{6}\ \frac{10}{4}$
3. $\frac{9}{16}\ \frac{9}{14}\ \frac{9}{10}$
4. $\frac{4}{12}\ \frac{4}{10}\ \frac{4}{9}$
5. $\frac{1}{14}\ \frac{2}{6}\ \frac{3}{7}$

Activity 4C

A. Arrange the group of fractions in descending order. Write your answer on a separate sheet of paper.

1. $\frac{5}{6}\ \frac{4}{8}\ \frac{3}{4}\ \frac{1}{5}$ _____

2. $\frac{2}{8}\ \frac{3}{10}\ \frac{1}{2}\ \frac{3}{5}$ _____

3. $\frac{1}{5}\ \frac{1}{10}\ \frac{1}{2}\ \frac{1}{7}$ _____

4. $\frac{3}{11}\ \frac{15}{11}\ \frac{9}{11}\ \frac{5}{1}$ _____

B. How do you arrange the fractions in ascending order:

$\frac{3}{4}\ \frac{4}{9}\ \frac{5}{8}\ \frac{1}{5}$? Answer: _____

Component 5: Lesson Conclusion

Time: (5 mins.)

Say:

How do we arrange a set of fractions in increasing or decreasing order?

- To order/arrange fractions with the same numerators but different denominators, compare their denominators. The greater the denominator of the fraction, the lesser the fraction.
- Instruct the learners to pair with their classmates and ask them to give examples of fractions equal to one and fractions greater than one and illustrate using regions, sets, and number lines.
- After the paired activity, ask for volunteers to show their outputs. Provide feedback on their work.
- Say, “You all did wonderfully today. I hope to see everybody again in our next meeting”.
- In the next lesson, we will discuss fractions that are equal to one and greater than one using regions, sets, and number lines.

REMINDER: Collect learners’ worksheets to review and analyze their learning.

Mathematics Grade 3 Lesson Plan #3

Visualizing and representing fractions that are equal to one and greater than one using regions, sets, and number lines.

Key Idea:

Fraction is a part of a whole. It can be represented using regions, sets, and number lines.

Fractions are called "*fractions equal to one*" when their numerators and denominators are the same.

Fractions are called "*fractions greater than one*" when the numerators are greater than the denominators.

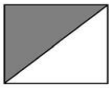
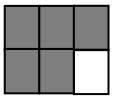
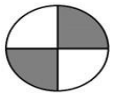
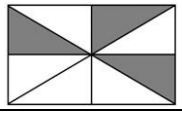
Most Essential Learning Competencies

- Visualizes and represents fractions that are equal to one and greater than one using regions, sets, and number lines.
- Identify fractions that are equal to one and greater than one in each region, sets, and number lines.

Component 1: *Lesson Short Review*

Time: 5 mins.

- Ask the class to do the review exercise on the worksheet.
- Let the pupils give the fractions for the shaded parts and unshaded parts.

Figure	Shaded parts	Unshaded parts
1. 		
2. 		
3. 		
4. 		
5. 		

Call on volunteers to give their answers.

Answers:

Fraction of shaded parts	Fraction of unshaded parts
$\frac{2}{3}$	$\frac{1}{3}$
$\frac{1}{2}$	$\frac{1}{2}$
$\frac{5}{6}$	$\frac{1}{6}$
$\frac{2}{4}$	$\frac{2}{4}$
$\frac{3}{8}$	$\frac{5}{8}$

Component 2: ***Lesson Purpose/Intention***

Time: 5 mins.

- Show pictures of pizza.

Ask the class, “Do you eat pizza? What is your favorite flavor? What are the benefits of eating pizza? Why do we cut pizza into slices equally?

Possible Answers:

1. - Rich in lycopene, a powerful antioxidant linked to a reduced risk of heart disease, and certain types of cancer.
   - It has protein to help our body’s daily functions.
   - It can help to maintain the diet.
   - It can make your bones stronger.
   - It can help you eat more veggies.
2. Pizza should be cut into equal pieces so that it is easy to eat and equally shared with others.

Component 3: *Lesson Language Practice*

Time: 5 mins.

- On a strip of paper, write the following words. Post them on the chalk board: *numerator*, *denominator*, *fraction equal to one*, *fraction greater than one*.
- Tell them that they will encounter the key words in the concepts to be taught.
- Assist the learners in doing the activity in the worksheet:

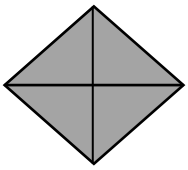
Give the meaning of the underlined words. Encircle the letter of the correct definition.

For numbers 1-2, refer to the figure on the right.

1. The shaded fraction above is $\frac{4}{9}$, and 4 represents the **<u>numerator</u>**.
   A. the part being considered.
   B. the number below the line in a fraction.
   C. the total number of parts the whole is divided into.

2. In the fraction $\frac{4}{9}$, 9 represents the **<u>denominator</u>**.
   A. the part being shaded.
   B. the part being unshaded.
   C. the total number of parts the whole is divided into.

3. The figure on the right show a **<u>fraction equal to one</u>**.



   A. The numerator is less than the denominator.
   B. The numerator is equal to the denominator.
   C. The numerator is greater than the denominator.

4. The set of fractions below shows $\frac{16}{10}$, which means that it is a **<u>fraction greater than one</u>.**

   A. The numerator is less than the denominator.
   B. The numerator is equal to the denominator.
   C. The numerator is greater than the denominator.

Answers: 1. A 2. C 3. B 4. C

Component 4*: Lesson Activity*

Time: 25 mins.

Component 4A

- Present this story problem to the class. Let them read and understand the problem.

It's Maxine's 7th Birthday, and her parents organized a birthday party for her. They invited some family and friends to come to celebrate, eat, and have fun.

The first ones who came were her cousins from Baguio City. They brought 1 huge box of Hawaiian pizza. Afterwards, her classmates arrived. They brought 2 boxes of ham and cheese pizza. When everything was set, they started the party by singing "Happy Birthday". Everybody was having fun joining parlor games and eating delicious food.

The Hawaiian pizza was equally shared among her 12 friends. While the 2 boxes of ham and cheese pizza were divided into 12 slices per box and 21 guests got an equal piece each and the remaining slices were eaten by her cousins. What part of a fraction was shared by her friends? What part of a fraction was shared by her other guests?

Component 4B

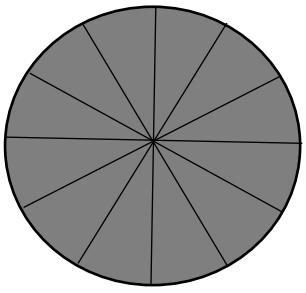
- After reading, ask the following questions and call volunteers to give their answers.
    1. Who will celebrate her birthday?
    2. Who organized her birthday party?
    3. How old is Maxine on her birthday?
    4. Who is her guest?
    5. What did they bring?
    6. How did they share each box of pizza equally?
    7. What is asked in the story?

Answers:

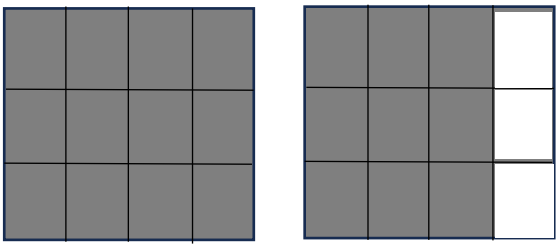
1. Maxine will celebrate her birthday.
2. Her parents organized her birthday party.
3. She will be 7 years old on her birthday.
4. The guests are her cousins, classmates, and friends.
5. They bring 1 box of Hawaiian pizza and 2 boxes of ham and cheese pizza.
6. They divided the pizza into 12 equal parts.
7. The fraction part being shared by her friends and the part eaten by other guests.

Component 4C

A. Let us illustrate the problem using **regions**.



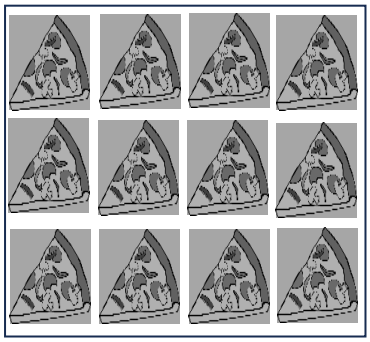
The Hawaiian pizza was divided into 12 equal parts and equally shared with 12 friends.
When we write it as a fraction, it will become $\frac{12}{12}$.
Notice that the numerator is equal to the denominator. This fraction is **equal to one**.



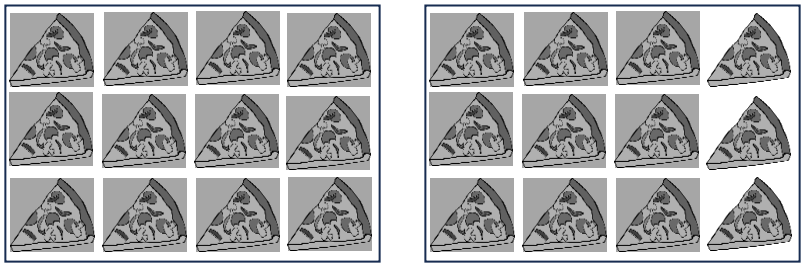
Two whole Pizzas are divided into twelfths. There are 24 twelfths, or $\frac{24}{12}$ and 21 out of $\frac{24}{12}$ are shaded. When we write as a fraction, it will become $\frac{21}{12}$. Notice that the numerator is greater than the denominator. This fraction is **greater than one**.

Therefore, the fraction part shared by Maxine's friend is $\frac{12}{12}$ and the part shared by other guests is $\frac{21}{12}$.

B. Let us illustrate the problem using a **set of fractions**.

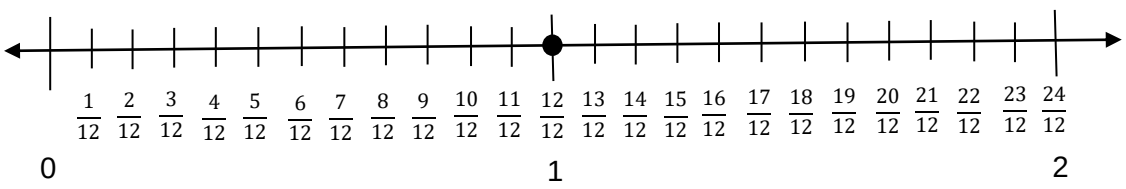


There are 12 shaded pizzas. This represents the parts shared by 12 friends. This part is the numerator.
The total number of pizzas in a set is 12. This is the denominator. Since, the numerator and the denominator are the same, this fraction is **equal to one**.



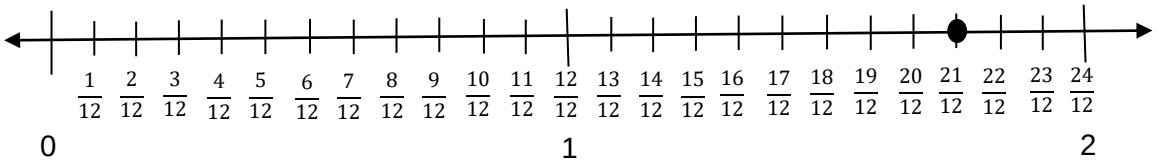
There are 21 shaded pizzas. This is the part eaten by the other guests. There are 12 pizzas in a set. 9 pizzas in the other set are shaded. Therefore, the fraction of the shaded pizzas is $\frac{21}{12}$. This is a fraction **greater than one**.

C. Let us illustrate the problem using **a number line**.



The segment between 0 to 1 is divided into 12 parts. When the point falls into 1, this is equal to $\frac{12}{12}$, which the numerator is the same as the denominator.

Therefore, this fraction is **equal to one**.



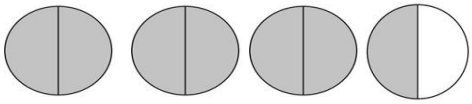
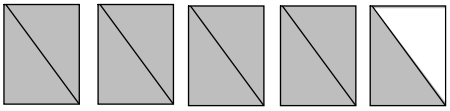
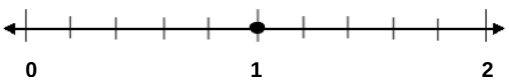
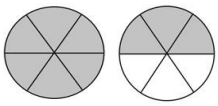
In the number line above, it shows that the point falls in $\frac{21}{12}$, which the numerator is greater than the denominator. And this fraction is **greater than one**.

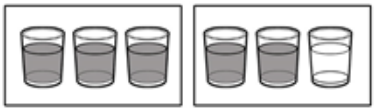
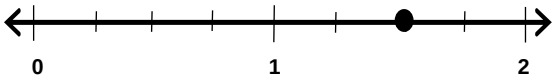
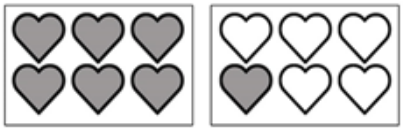
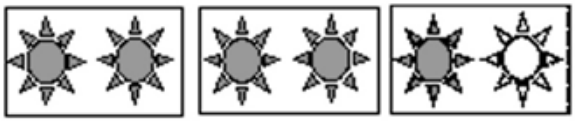
Remember: Some fractions are equal to one. Other fractions are greater than one.

Say: Answer the following activities in the worksheet. Discuss the answers.

Activity 1:

Match the fraction in column A to its correct figure in column B. Then, identify if the given fraction is a *fraction equal to one* or a *fraction greater than one*. Write your answer on the space provided.

fraction equal to one or ***fraction greater than one***	**column A**	**column B**
_____	____ 1) $\frac{5}{3}$	A. 
_____	____ 2) $\frac{7}{6}$	B. 
_____	____ 3) $\frac{9}{2}$	C. 
_____	____ 4) $\frac{12}{12}$	D. 
_____	____ 5) $\frac{6}{4}$	E. 

_____	____ 6) $\frac{7}{2}$	F. 
_____	____ 7) $\frac{5}{5}$	G. 
_____	____ 8) $\frac{5}{2}$	H. 
_____	____ 9) $\frac{8}{8}$	I. 
_____	____ 10) $\frac{9}{6}$	J. 

Answers:

1. F – fraction greater than one
2. H - fraction greater than one
3. B - fraction greater than one
4. E – fraction equal to one
5. G - fraction greater than one
6. A - fraction greater than one
7. C – fraction equal to one
8. J - fraction greater than one
9. I – fraction equal to one
10. D - fraction greater than one

Activity 2: Read and answer each question, then explain.

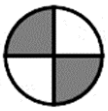
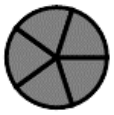
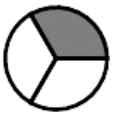
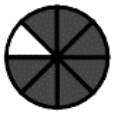
1. What is the fraction name of the whole figure below? How do you know?

Answer: $\frac{4}{4}$, because the whole is divided equally into four. Each part is called $\frac{1}{4}$. Four $\frac{1}{4}$ is equal to $\frac{4}{4}$. Therefore, it is a fraction equal to one.

2. What is the fraction name of the shaded parts? Why?

Answer: $\frac{8}{5}$, because there are two one wholes. Each is equally divided into fifths. One whole with five fifths is shaded. Three-fifths of the other whole is shaded. The fifths in the first figure and $\frac{3}{5}$ in the second figure are all $\frac{8}{5}$ .Therefore, it is a fraction greater than one.

3. Which of the following shows fraction equal to one?

A.  B.  C.  D. 

Answer: The figure in letter B shows fraction equal to one because the numerator and the denominator are equal.

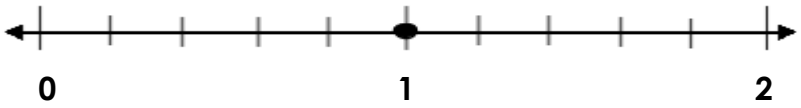
4. What fraction is shown in the set and number line below?

A. $\frac{4}{4}$ B. $\frac{5}{4}$ C. $\frac{6}{4}$ D. $\frac{7}{4}$

Answer: The fraction shown in the set and number line is $\frac{4}{4}$. The part being considered is equal to the total number in a set or number line.

5. What is the fraction shown in the number line below? How do you know?



Answer: $\frac{5}{5}$, because the segment of the line is divided equally into five.

Activity 3: Who am I?

Identify the fraction being described, then illustrate using regions, sets, or number lines.

1. I am a fraction equal to one. My denominator is 9.
2. I am a fraction whose denominator is 5 and whose numerator is 8.
3. I am a fraction that shows 10 of 7 equal parts.
4. I am a fraction equal to one and my numerator is 6.
5. I am a fraction that shows 12 of 9 equal parts.

Answers: **Note:** *illustrations may vary.*

1.) $\frac{9}{9}$

2.) $\frac{8}{5}$

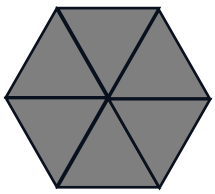
3.) $\frac{10}{7}$

4.) $\frac{6}{6}$

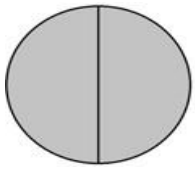
5.) $\frac{12}{9}$

Activity 4: Card Game: "*Fraction I have, who has?*"

Say: Each pupil will be given fraction cards. The teacher starts by reading his or her "Who has" question. All pupils look at their cards. The pupil with the correct answer responds with their "I have" answer, followed by their "Who has" question. Play continues until the sequence returns to the teacher.



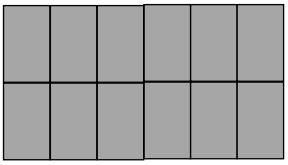
I have ___. I am a fraction equal to one. Who has $\frac{2}{2}$?



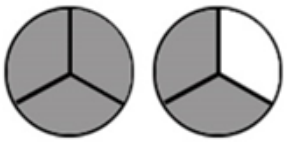
I have ___. I am a fraction equal to one. Who has $\frac{4}{4}$?

I have ___. I am a fraction equal to one. Who has $\frac{5}{5}$?

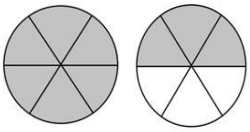
I have ___. I am a fraction equal to one. Who has $\frac{12}{12}$?



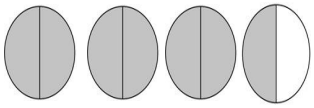
I have ___. I am a fraction equal to one. Who has $\frac{5}{3}$?



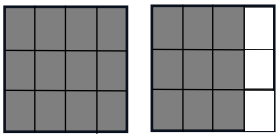
I have ___. I am a fraction greater than one. Who has $\frac{9}{6}$?



I have ___. I am a fraction greater than one. Who has $\frac{7}{2}$?



I have ___. I am a fraction greater than one. Who has $\frac{21}{12}$?



I have ___. I am a fraction greater than one. Who has $\frac{6}{6}$?

Note: *The teacher may add a set of cards if necessary, so that all pupils may be given cards. It can be a fraction using sets, or number lines.*

Component 5: Lesson Conclusion

Time: 5 mins.

- Say, "**Fraction equal to one** when the numerator and denominator are the same." and **fraction greater than one** when the numerator is greater than the denominator.
  Say: "How can you show a fraction equal to one and fraction greater than one using regions, set and number line?"
- Say: Pair with your classmates and give examples of fractions equal to one and fractions greater than one, and illustrate using regions, sets, and number lines.
- After the paired activity, ask for volunteers to show their outputs. Provide feedback on their work.

Reflection: Is it important to divide equally? Why?

- Say: "You all did wonderfully today. I hope to see everybody again in our next meeting to learn about writing and reading fractions that are equal to one or greater than one in symbols and in words".

REMINDER: Collect learners' worksheets to review and analyze their learning.

Mathematics Grade 3 Lesson Plan #4

Reading and Writing fractions that are Equal to One and Greater than One in Symbols and in Words.

Key Idea:

- Fractions are called “fractions equal to one” when their numerators and denominators are the same.
- Fractions are called “fractions more than one” when the numerators are greater than the denominators.
- Fractions equal to one and greater than one can be written in words and in symbols.
- In reading and writing fractions equal to one and greater than one, read and write the numerator first before the denominator.

Most Essential Learning Competencies

- Reads and writes unit fractions in symbols and in words.
- Reads and writes fractions equal to one or more than one in symbols and in words. **(M3NS-IIIb-76.3)**

Component 1: *Lesson Short Review*

Time: 5 mins.

This lesson is all about reading and writing fractions that are equal to one or greater than one in symbols and in words.

A fraction is equal to one if the numerator and denominator are the same.

A fraction is greater than one if the numerator is bigger than the denominator.

In reading and writing fractions equal to one and greater than one, read and write the numerator first before the denominator.

Examples of fractions written in words are: **twelve-twelfths and six-eighths**
Examples of fractions in symbols are: $\frac{12}{12}$ **and** $\frac{6}{8}$

- Have a review of fractions equal to one and greater than 1.
- Ask the class to do the review exercise on the worksheet.

Write **A** if the fraction is equal to one and **B** if the fraction is more than one.

1. $\frac{9}{9}$
2. $\frac{7}{5}$
3. $\frac{5}{3}$
4. $\frac{6}{6}$
5. $\frac{15}{12}$

- Call on volunteers to give their answers.

Answers:

1. A

2. B

3. B

4. A

5. B

Component 2: *Lesson Purpose/Intention*

Time: 3 mins.

Ask the class to read the problem. Let the pupils act it out. Have them answer the questions below.

> Maria cut a cartolina into 10 equal parts. He gave 2 pieces to each of her 4 classmates and she used the rest. What part did each one get?

- Talk about the story problem.
- Ask:

1. Who cut the cartolina?
2. In how many parts did she cut the cartolina?
3. What part did each one get?
4. How do you write the fraction in words? in symbols?
5. What parts were used by Maria and her classmates?
6. Write the fraction in symbols and in words.

Answers:

1. Maria cut the whole cartolina.

2. Into 10 parts

3. $\frac{2}{10}$

4. In writing fractions equal to one and greater than one, write the numerator first before the denominator.

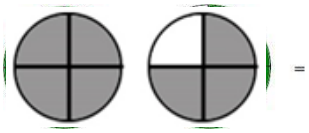
5. Symbol: $\mathbf{\frac{10}{10}}$ **,** Word: ten-tenths

Component 3: *Lesson Language Practice*

Time: 5 mins.

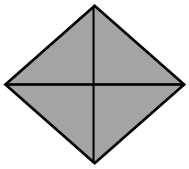
- On a strip of paper, write the following words. Post them on the chalk board: *fraction equal to one*, *fraction greater than one, and symbol.*
- Tell them that they will encounter the key words in the concepts to be taught.
- Assist the learners in doing the activity in the worksheet:

Give the meaning of the underlined words. Encircle the letter of the correct definition.



1. The shaded fraction above is $\frac{7}{4}$, and the fraction is <u>greater than one</u>.
   A. The numerator is less than the denominator.
   B. The numerator is equal to the denominator.
   C. The numerator is greater than the denominator.

2. The figure on the right shows **<u>fraction equal to one</u>**.



   A. The numerator is less than the denominator.
   B. The numerator is equal to the denominator.
   C. The numerator is greater than the denominator.

3. The fraction $\frac{16}{10}$ is written as a <u>symbol.</u>
   A. figure/number
   B. word
   C. drawing

Answers: 1. C 2. B 3. A

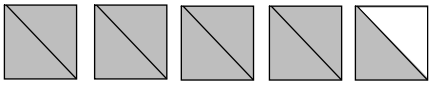
Component 4*: Lesson Activity*

Time: 25 mins.

Component 4A

Present this story problem to the class. Let them read and understand the problem.

Some pupils of Mrs. Molina's class colored game-squares. How many game-squares did the pupils color?

We see: 

We read: $\frac{9}{2}$ The fraction is written as a **symbol.**

We write: nine-halves. The fraction is written **in words.**

Component 4B

After reading, ask the following questions and call on volunteers to give their answers.

Ask:

1. How many parts did they color?
2. What do you call the number above the bar line?
3. How about the number below the bar line?
4. How do you write a fraction in symbols? in words?
5. What can you say about the numerator and the denominator of a fraction equal to one and greater than one?

Answers*:*

1. 9
2. Numerator
3. Denominator
4. In writing fractions equal to one and greater than one, write the numerator first before the denominator.

   Symbol: $\frac{9}{2}$ **,** Word: nine-halves
5. Fractions equal to one have the same numerator and denominator while fractions greater than one have numerator that is greater than the denominator.

- Fractions equal to one and greater than one can be written in words and in symbols.

Component 4C

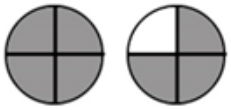
Activity 1

Copy the fraction written in words and write its corresponding numerical symbol on your paper. Then, write the letter of the correct figure.

1. Seven – fourths___
2. Three- halves___
3. Four-fourths____
4. Four – halves ___
5. Sixteen-tenths_____

A.

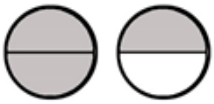
B.



C.

D.

E.



Answers**:**

1. B $\frac{7}{4}$

2. E $\frac{3}{2}$

3. A $\frac{4}{4}$

4. C $\frac{4}{2}$

5. D $\frac{16}{10}$

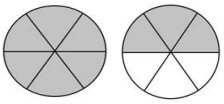
Activity 2

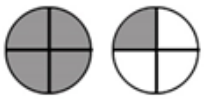
Directions: Write the letter of the correct answer.

1. What fraction is the same as seven-fifths?

A. $\frac{10}{5}$ B. $\frac{9}{5}$ C. $\frac{8}{5}$ D. $\frac{7}{5}$

2. Which illustration shows nine-sixths?

A. 

B. 

C. 

D. 

3. Which fraction shows one whole or fraction equal to one?

A. $\frac{9}{4}$ B. $\frac{7}{4}$ C. $\frac{9}{9}$ D. $\frac{6}{4}$

4. How is $\frac{9}{4}$ written in words?
   A. Four-fourths
   B. Five-fourths
   C. Seven-fourths
   D. Nine-fourths

5. Nora bought 2 boxes of bibingka. She divided each box into 10 equal parts. Her brothers and sisters ate 13 parts. Which of the following fractions shows the parts eaten by her brothers and sisters?

A. $\frac{13}{10}$ B. $\frac{13}{15}$ C. $\frac{12}{13}$ D. $\frac{10}{10}$

Answers:

1. D
2. A
3. C
4. D
5. A

Activity 3

Match the fractions in words in column A with their symbols in column B. Write the letter of the correct answer before the number.

Column A	Column B
_____1. Seven-fifths	A. $\frac{6}{4}$
_____2. Twelve- fifths	B. $\frac{10}{8}$
_____3. Six- fourths	C. $\frac{3}{3}$
_____ 4. Ten -eighths	D. $\frac{7}{5}$
_____5. Three-thirds	E. $\frac{12}{5}$

Answers:

1. D
2. E
3. A
4. B
5. C

Component 5: Lesson Conclusion

Time: 5 mins.

- Say: What is a fraction equal to one? greater than one?
- Ask: Can fractions equal to one and fractions greater than one be read and written in symbols and in words? How are they read? Written?

  What is the relationship between the numerator and the denominator of a fraction that is equal or greater than 1?
- Say: Select a partner. Give examples of fractions equal to one and fractions greater than one and write them in words and in symbols.

Reflection

- Which is easier to write and read: fractions using words or symbols? Why?
- End the class by saying, “You all did wonderfully today. I hope to see everybody again in our next meeting to discuss about missing term/s in a given combination of continuous and repeating pattern.”

REMINDER: Collect learners’ worksheets/answer sheets to review and analyze their learning.

Mathematics Grade 4 Lesson Plan #5

Determines the missing term/s in a given combination of continuous and repeating pattern.
(M3AL-IIIi-4)

Key Idea

- Demonstrates understanding of continuous and repeating patterns and mathematical sentences involving multiplication and division of whole numbers.

Most Essential Learning Competencies

- Determines the missing term/s in a given combination of continuous and repeating pattern. **(M3AL-IIIi-4)**

Component 1: *Lesson Short Review*

Time: 5 mins.

- Ask the learners to complete the mathematical equation below>

  Q1: 2 + _____ = 6

  Q2: _____ + 7 = 17

  Q3: 15 – 9 = _____

  Q4: 4 x _____ = 24

  Q5: _____ ÷ 7 = 6

- Ask learners to volunteer to read out and explain their answers in front of the class.
- A positive reinforcement should follow every after correct answers.

Sample answers:

Q1. 4
Q2. 10
Q3. 6
Q4. 6
Q5. 42

Component 2: ***Lesson Purpose/Intention***

Time: 5 mins.

- There are things that can be found in your bag.
- Show pictures of the following: eraser, paper, pencil, and notebook.
- Ask:
  - What comes first? Next and last?
- Let the pupils arrange the pictures in front.
- Let another pupil arrange the pictures right beside the first set with the same arrangement.
- Ask:
  - What can you say about the set of things?
  - Does the arrangement of things repeat?
  - How are they arranged?

Component 3: *Lesson Practice*

Time: 5 mins.

- Display a pattern card showing a combination of continuous and repeating patterns.
- Example: BCBC or CCDDEE
- Emphasize that patterns can have a sequence that repeats or they can continue in a logical order.
- Provide a chart and explain how the letters represent different elements or objects in the pattern.
- Discuss that it is very important to find the rule in the pattern and to use the rule in determining the missing terms.
- Let the pupil answer **Activity #2** on the worksheets.

Option B:

- Have the pupils study the given patterns below:
  A A a A a A a A _____

- Ask the following:
  - How are the letters arranged?
  - What letters should be put on the line? Why?
- Let the pupils observe the next set of figures.
- Ask the following:
  - What kind of pattern is given?
  - How are they arranged?
  - What pattern was created?
  - What shape should be put on the line?

_____

- Emphasize that these are examples of repeating patterns. Repeating patterns are sequences of shapes or numbers that repeat constantly and regularly. One can predict the next term or missing term by looking at the regularity of the shapes, or figures, or numbers repeated.

Component 4*: Lesson Activity*

Time: 25 mins.

Component 4A

- Distribute different pattern cards to each group. The pattern card should include an example of continuous and repeat patterns.
- Let the learners work in pairs to identify the missing term/s in the pattern cards they received.
- Encourage the learners to explain their work and justify their answer by providing the rule of the pattern.
- Let the pupils answer **Activity #3 and Activity #4** on the worksheets.

- Present the given situation below:
  - Using the following, make a pattern.
    - Start with number 8, then increase the succeeding numbers by 5.
    - The first number is 140, then decrease the next numbers by 420.
    - The first number is 42, then increase by 7 and decrease by 4 the next numbers.
- Let the pupils understand the given and let them solve the problem.
- The teacher will explain how to solve the problem.

Component 5: Lesson Conclusion

Time: 5 mins.

- Let the learners' seat properly and let them share their experiences while doing the activity on finding the missing terms on the pattern.
- Say: In which part of the lesson did you find it difficult or challenging?
- Say:
  - How can you identify the missing term/s in a given pattern of shapes, figures, or numbers?
    - Look how the figures or shapes are arranged and identify which shape/s repeat over and over.
    - Identify the order of the repeated figures.
  - How can you find the missing number/s in a given pattern or sequence?
    - Determine if the numbers are arranged in increasing or decreasing order.
    - Explore the relationship between the numbers by finding the difference between numbers that are next to each other.

    Use the difference between numbers to find the missing number.
  - Answer **Activity #5** on the worksheets.
  - If there is enough time, answer **Activity 6.**

REMINDER: Collect learners' worksheets/answer sheets to review and analyze their learning.

MATHEMATICS Grade 3 Lesson Plan #6

Key Idea

In adding 3- to 4-digit number up to three addends with sums up to 10 000 without and with regrouping should starts from the rightmost place value and progressing to the left.

Most Essential Learning Competencies

- adds 3- to 4-digit numbers up to three addends with sums up to 10 000 without and with regrouping. M3NS-Id-27.6

Component 1: *Lesson Short Review*

Time: 5 mins.

- Let's Play Matching 10's.

Materials: Deck of cards numbered 1 through 10

Directions:

1. Shuffle the deck thoroughly.
2. Lay out the cards face down in a grid pattern on the flat surface.
3. Players take turns flipping over two cards at a time.
4. If the two flipped cards are up to 10 (3 and 7) the player keeps the pair and earns a point.
5. If the two cards don't add up to 10, the player flips them back over, and it's the next player's turn.
6. Play continues in turns until all pairs of up to 10 are matched.
7. The game ends when all pairs that add up to 10 have been matched.

Answers:

(10 and 0, 1 and 9, 2 and 8, 3 and 7, 4 and 6, 5 and 5 and vice versa)

Component 2: ***Lesson Purpose/Intention***

Time: 5 mins.

The purpose of this lesson is to show how to add 3 - to 4 - digit number up to three addends with sums up to 10 000 without and with regrouping. In mastering this skill, we will handle mathematical and real-world problems scenarios effectively and confidently, and we will become more fluent in adding greater numbers.

Component 3: *Lesson Language Practice*

Time: 5 mins.

- Read out difficult or unfamiliar words or phrases and ask the students to read them to themselves and then out loud as a class.
  Addends – numbers to be added.
  Sum or Total – answer or result in addition.
  Regrouping is the process of grouping numbers in tens while performing addition.

- Read out the terms and ask learners to read them to themselves and then out loud as a class.

Component 4*: Lesson Activity*

Time: 25 mins.

Component 4A

- Reading the text

> The three provinces with highest number of barangays in the Philippines are Iloilo, Leyte, and Pangasinan. Iloilo has 1,721 barangays; Leyte has 1,503 barangays; and Pangasinan has 1364 barangays. If you add the barangays of these three provinces, what is the total?

- Ask learners if there are words that they are not familiar with and give descriptions of any words that may be problematic.

Component 4B

- Say: Read the following questions and write your answers on your answer sheet.

Q1. How many barangays does Iloilo have?

Q2. Which province has the fewest barangays among Iloilo, Leyte, and Pangasinan?

Q3. How many barangays does Leyte have?

Q4. If Pangasinan has 1364 barangays, how does it compare to the number of barangays in Iloilo?

Q5. What is the total number of barangays of the three provinces?

Q6. How do you come up with your answer?

- Observe learners' answers. Ask learners to volunteer their answers, giving positive feedback.
- Select a sample answer for all learners to write down. This may come from one of the learners or from the following sample answers.

Sample answers:

Q1. Iloilo has 1,721 barangays.

Q2. Pangasinan has the least barangays among the three provinces.

Q3. Leyte has 1,503 barangays.

Q4. Pangasinan has fewer barangays than Iloilo.

Q5. The total number of barangays in Iloilo, Leyte, and Pangasinan altogether is

1,721 + 1,503 +1364= 4588 barangays.

To come up with the answer we follow the steps in adding 3- to 4-digit number up to three addends with sums up to 10 000 without and with regrouping.

Step 1
Align each digit.
In each place value.
Add the ones.
1+ 3 + 4 = 8

```
 1 721
 1 503
+1 364
     8
```

Step 2
Add the tens.
2 + 0 + 6 = 8

```
 1 721
 1 503
+1 364
    88
```

Step 3
Add the hundreds.
7+ 5 + 3 = 15
Rename 15 as 1 ten and 5 ones.
Regroup 1 to the thousands place.

```
   1
 1 721
 1 503
+1 364
   588
```

Step 4
Add the thousands.
1 + 1 + 1 + 1= 4

```
   1
 1 721
 1 503
+1 364
 4 588
```

Component 4C

Activity 1

- Say: Read the following questions and write your answer on your answer sheet.

  Q1. Bea and Dominic are trying to answer 2 178 + 1 193 + 624
  Bea adds 2 180 + 1 195 + 624
  Dominic adds 2 171 + 1 200 + 624
  Whose result is equal to 2 178 + 1 193 + 624?

  Q2. Ara and Mar want to add 1 855 + 152 + 200.
  Ara adds 1 850 + 150 + 5 + 2 + 200
  Mar adds 1 800 +150 + 50 + 5 + 2 + 200
  Whose result is equal to 1 855 + 152 + 200?

  Q3. Shiny wants to solve 3 158 + 4 565 + 1 200.
  So, she adds 3000 + 4 000 +1 000 + 200 + 550 + 150 + 15 + 8
  Is Shiny 's result equal to 3 158 + 4 565 + 1 200?

  Q4. Add 4 112 + 3 521 + 2 323

  Q5. Add 132 + 521+ 523

- Walk around, giving encouragement and looking at learners' answers. Ask them to volunteer their answers, giving positive feedback.
- Select a sample answer for all learners to write down for each question. This may come from one of the learners or from the following sample answers.

Sample answers:

Q1. Dominic's answer has the same results, which are 3 995?

Q2. Both Ara and Mar results which is 2 207.

Q3. Yes, 3 000 + 4 000 +1 000 + 200 + 550 +150 +15 + 8 = 3 158 + 4 565 +1 200

Q4. 9 956

Q5. 1 176

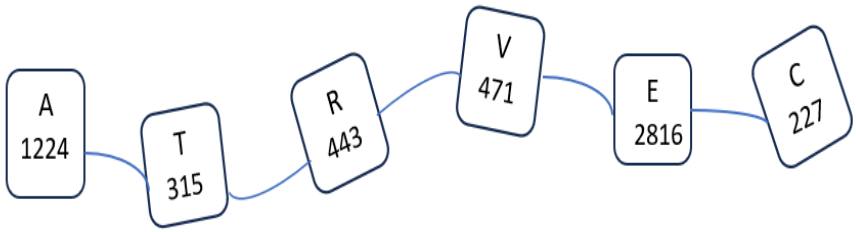
Activity 2: "Sum Words"

Directions:

For this activity, you will need activity bond paper, cut- out of

letters ATRVEC

- The numbers 1 224, 315, 443, 471, 2 816, and 227 are assigned to the letters A, T, R, V, E, C



- Form a 3-letter word using these letters. Each letter can be used once.
- The score of the word is the sum of the numbers of its letters.
- Write your answer on the activity sheet.

WORD	NUMBERS	SUM OF SCORE
Ex. CAR	227 + 1 224 + 443	1 894
1.		
2		
3		
4		
5		
6		
7		
8		

Activity 3: "Mix and Match Addends"

Directions:

1. Read each sum carefully.
2. Examine the provided addends.
3. Choose 3 addends that make up the given sum.
4. Write the numbers of the chosen addends in the spaces provided.
   Check your answer and repeat for each sum.

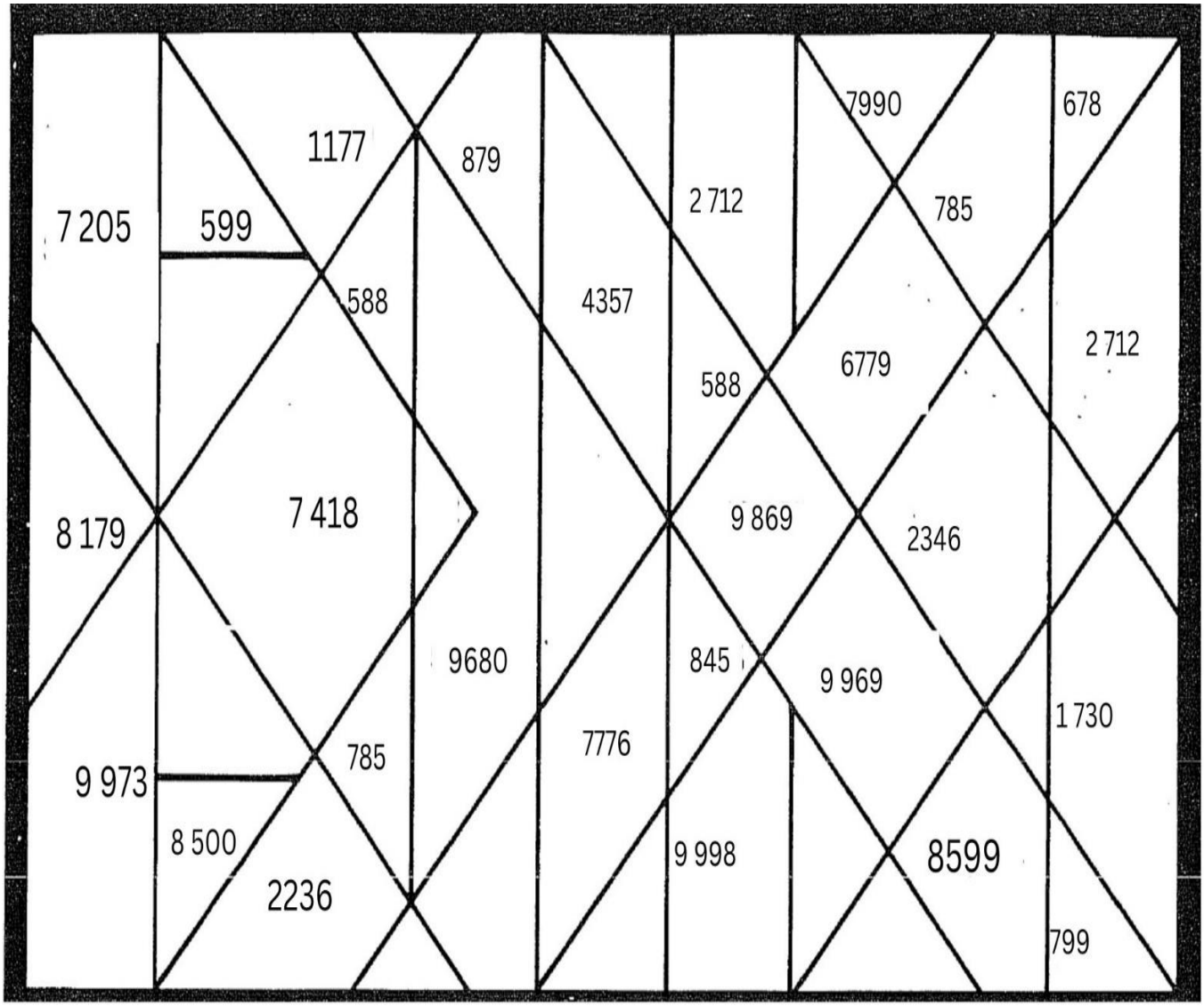
SUM	ADDENDS	ANSWER
1. 507	219 236 132 156	
2. 9 598	1228 7 132 5 154 3 216	
3. 9 762	3 255 4 344 2 163 6 132	
4. 1112	101 312 573 438	
5. 8136	4 387 2 273 6 354 1 476	

Activity 4: "Shade Smart"

Directions:

1. Do the exercises below and find your answers in the rectangle.
2. Shade or color in each area containing the correct answer.
3. Discover what dentists hate.

Dentists Hate It!



1. 3 145
2 233
+ 3 221

2. 2 356
1 212
+ 3 211

3. 5 123
2 314
+ 2 432

4. 2 416
3 423
+ 4 130

5. 6 234
1 352
+ 2 412

6. 2 367
3 374
+ 2 759

7. 2 245
3 215
+ 1 745

8. 4 678
1 347
+ 2 154

9. 4 364
2 435
+ 3 174

10. 2 165
2 132
+ 3 121

11. 2 153
3 214
+ 4 313

12 . 324
275
+ 547

13. 476
458
+ 243

14. 432
546
+ 752

15. 894
965
+ 853

16. 654
763
+ 819

17. 310
231
+ 304

18. 223
171
+ 205

19. 211
451
+ 123

20. 234
221
+ 133

21. 432
253
+ 114

22. 354
113
+ 211

Activity 5: Block Addition Challenge

Materials Needed:
Base -10 blocks (units, rods, flats, and cubes)
Addition problem cards

Directions:
1. Divide into small groups of 3-4 learners.
2. Each group gets base 10 blocks and addition problem cards.
3. Use the blocks to represent the numbers in the addition problem. 3-digit numbers use units, rods, and flats. 4 - digit numbers use units rods, flats, and cubes.
4. Work together to add the numbers using the blocks. Decide if you need to regroup.
5. The recorder writes down the addition problem and the solution.
6. Share and discuss your strategy and how you use the blocks.

Addition card

1. 2 367
   3 374
   + 2 759

2. 2 245
   3 215
   + 1 745

3. 4 678
   1 347
   + 2 154

4. 4 364
   2 435
   + 3 174

5. 2 165
   2 132
   + 3 121

Component 5: Lesson Conclusion

Time: 5 mins.

- Say: Add 3 - to 4 - digit numbers up to three addends with sums up to 10 000 without and with regrouping.

Reflection:

- Say: Answer the following questions and write your answer on your answer sheet.
  Q1. Did you find it easier to add numbers without regrouping or with regrouping? Why?
  Q2. Can you explain when and why we need to regroup when adding numbers?
  Q3. What new concepts or skills do you learn about during this lesson?
  Q4. What strategies did you use to check your answer and ensure accuracy?
  Q5. Did collaborating with your classmates help you understand addition better? How?
- Let learners know that good learners reflect on their learning.

REMINDER: Collect learners' worksheets/answer sheets to review and analyze their learning.

Mathematics Grade 3 Lesson Plan #7

Visualizes, Represents, and Subtracts 3-Digit to 4-Digit numbers with and without regrouping.

Key Idea

Subtraction with and without regrouping

Lesson Component 1 (Lesson Short Review)

Time: 7 minutes

Directions: Perform the indicated operation.

1) $89 - 85 =$ _____

2) $98 - 63 =$ _____

3) $11 - 4 =$ _____

4) $13 - 8 =$ _____

5) $15 - 9 =$ _____

Answers

1) 4 2) 35 3) 7 4) 5 5) 6

Lesson Component 2 (Lesson Purpose/Intention)

Time: 3 minutes

Teacher states:

We can use what we have learned about subtracting numbers using concrete objects. Today we will subtract 3-digit to 4-digit numbers with or without regrouping.

Lesson Component 3 (Lesson Language Practice)

Time: 5 minutes

Key words/terms are:

Subtract, With regrouping, Without regrouping

Lesson Component 4 (Lesson Activity)

Time: 25 minutes

Part 4A

Stem for Items 1 and 2

Item 1: Angelo is tasked to find the difference between the numbers below.

a) 987 – 356 b) 364 – 51

He is also asking you to do the same so that he can compare his answers with your answers.

Item 2: Veronica is tasked to find the difference between the numbers below.

a) 85 – 67 b) 1120 – 978 c) 1,000 – 785

She is also asking you to do the same so that she can compare her answer with your answer.

Part 4B

Item 1

Questions

Let us compare your answer with his.

1. What is your answer in a?

2. What is your answer in b?

Answers to Item 1

1. You can write it vertically to align the place values and subtract the numbers on the same place value.

a) 9 8 7
− 3 5 6
6 3 1

2. You can write it vertically to align the place values and subtract the numbers on the same place value.

b) 3 6 4
− 5 1
3 1 3

Part 4C

Item 2

Questions

Let us compare your answer with hers.

1. What is your answer in a?

2. What is your answer in b?

3. What is your answer in c?

Answers to Item 2

1. You can write it vertically to align the place values.

a) 8 5 *method 1*: regroup 85 becomes 7 15
− 6 7 67 is still − 6 7
1 8

method 2: Note that $9 - 5 = 10 - 6 = 8 - 4 = 4$. This means that if you add or subtract the same quantity from the minuend and the subtrahend, the difference is still the same. Thus, we can have (we need a strategy for doing this)

8 5 + 3 = 8 8
− 6 7 + 3 = 7 0
1 8

In this method, we can avoid regrouping (borrowing).

2. You can write it vertically to align the place values.

b) 1 1 2 0 *method 1*: 11 2 0 becomes 10 11 10
− 9 7 8 9 7 8 is still 9 7 8
1 4 2

method 2: 1120 + 22 = 1 1 4 2
978 + 22 = 1 0 0 0
1 4 2

3. You can write it vertically to align the place values.

c) 1 0 0 0 *method 1*: 10 0 0 becomes 9 9 10
− 7 8 5 7 8 5 is still 7 8 5
2 1 5

method 2: In this case, it is better to subtract 1 from each number.
1000 – 1 = 9 9 9
785 – 1 = 7 8 4
2 1 5

Lesson Component 5 (Lesson Conclusion – Reflection/Metacognition on Student Goals)

Time: 5 minutes

The teacher facilitates student reflection and discussion, that addresses such questions as:

- What were the key mathematical concepts addressed in this lesson?
- Would you rate your understanding of the material covered in this lesson as high, moderate, or low?
- Has the lesson helped you gain further insight into aspects of the material covered that represent strengths or weaknesses?
- What would you describe as the main barriers, if any, to your ongoing progress and achievement in relation to the topic area addressed in this lesson?
- What do you think would best assist your ongoing progress and achievement in relation to the topic area?

Mathematics Grade 3 Lesson Plan #8

Solves Routine and Non-routine Problems Involving Subtraction of Whole Numbers Including Money using Appropriate Problem-Solving Strategies and Tools.

Key Idea

Problem Solving Involving Subtraction

Lesson Component 1 (Lesson Short Review)

Time: 7 minutes

Directions: Perform the indicated operation.

1) $85 - 72 =$ _____

2) $307 - 165 =$ _____

3) $198 - 76 =$ _____

4) $254 - 178 =$ _____

5) $500 - 385 =$ _____

Answers

1) 13 2) 142 3) 122 4) 76 5) 115

Lesson Component 2 (Lesson Purpose/Intention)

Time: 3 minutes

Teacher states:

We can use what we have learned about subtracting numbers without and with regrouping. Today we will solve problems involving subtraction.

Lesson Component 3 (Lesson Language Practice)

Time: 5 minutes

Key words/terms are:

Problem solving, subtraction

Lesson Component 4 (Lesson Activity)

Time: 25 minutes

Part 4A

Stem for Items 1 and 2

Item 1: Mariel has 320 cm of ribbon and she used 185 cm of it for her first project. She will use the remaining ribbon for her second project.

Item 2: Belle bought a pair of socks worth ₱ 169 and a set of handkerchiefs worth ₱ 245. She hands in ₱ 500 to the cashier.

Part 4B

Item 1

Questions

1. How long was Mariel's ribbon before she used it?

2. What is the length of the ribbon she used for her first project?

3. How long is the ribbon left for Mariel's second project?

Answers to Item 1

1. She has 320 cm of ribbon.

2. She used 185 cm for her first project.

3. 3 2 0 cm

– 1 8 5 cm

1 3 5 cm is left for her second project.

Part 4C

Item 2

Questions

1. What is the total amount of items she bought?

2. How much change will she receive from the cashier?

Answers to Item 2

1. The total amount of items she bought is

₱ 1 6 9
+ ₱ 2 4 5
₱ 4 1 4

2. The change that she will receive is

₱ 5 0 0
– ₱ 4 1 4
₱ 8 6

Lesson Component 5 (Lesson Conclusion – Reflection/Metacognition on Student Goals)

Time: 5 minutes

The teacher facilitates student reflection and discussion that addresses such questions as:

- What were the key mathematical concepts addressed in this lesson?
- Would you rate your understanding of the material covered in this lesson as high, moderate, or low?
- Has the lesson helped you to gain further insight into aspects of the material covered that represent strengths or weaknesses?
- What would you describe as the main barriers, if any, to your ongoing progress and achievement in relation to the topic area addressed in this lesson?
- What do you think would best assist your ongoing progress and achievement in relation to the topic area?

Mathematics Grade 3 Lesson Plan #9

Multiplies Numbers:

a. 2- to 3-digit numbers by 1-digit numbers without or with regrouping
b. 2-digit number by 2-digit numbers without or with regrouping
c. 2- to 3-digit numbers by multiples of 10 and 100

Key Idea

Multiplication

Lesson Component 1 (Lesson Short Review)

Time: 7 minutes

Directions: Perform the indicated operation.

1) 8×4

2) 3×3

3) 7×7

4) 6×9

5) 8×7

Answers

1) 32 2) 9 3) 49 4) 54 5) 56

Lesson Component 2 (Lesson Purpose/Intention)

Time: 3 minutes

Say:

We can use what we have learned about multiplication in the previous grade level. Today we will learn to multiply numbers with at least one digit. This strategy will always work no matter how many digits we are multiplying.

Lesson Component 3 (Lesson Language Practice)

Time: 5 minutes

Key words/terms are:

Multiplication, more than one digit.

Lesson Component 4 (Lesson Activity)

Time: 25 minutes

Part 4A

Stem for Items 1 and 2

Item 1: Teacher Vina told her pupils to find the product using any method they had learned in the previous grade level.

a) 234×2 c) 43×22

b) 234×6 d) 85×67

Item 2: Teacher Rhea told her pupils to multiply these numbers with or without using scratch paper.

- a) 584×10 b) 584×100 c) 584×1000
- a) 42×20 b) 42×200 c) 42×2000
- a) 458×30 b) 458×300 c) 458×3000

Part 4B

Item 1

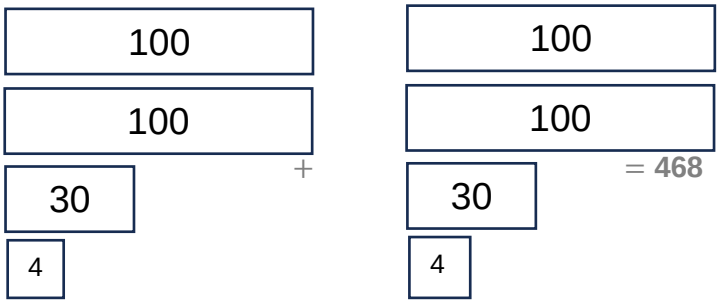
Questions

1) Give the product of each item using the method that you have learned in the previous year.

2) Which method among the methods that you used can give you the answer faster/est?

Answers to Item 1

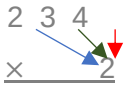
1) a) method 1: We know that $234 \times 2 = 2 \times 234$. So, we have



method 2: We know that $234 \times 2 = 2 \times 234$. So, we have

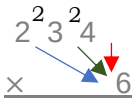
$234 \times 2 = 234 + 234 = \mathbf{468}$

Method 3:



4 6 8

b)



14 0 4

c) 946

d) 5,695

2) Answers may vary.

Part 4C

Item 2

Questions/Instructions

1. Give the product of each item?
2. What pattern have you observed in multiplying a number by 1, 10, 100, and 1000?
3. What pattern have you observed in multiplying a number by 2, 20, 200, and 2000?
4. What if the number of zeroes increases? What do you think will happen to the product?

Answers to Item 2

1. I. a. 5,840 b. 58,400 c. 584,000

   II. a. 840 b. 8,400 c. 84,000

   III. a. 13,740 b. 137,400 c. 1,374,000

2. The answers may vary. – *Just multiply the number by 1 then affix the zeros.*
3. The answers may vary. – *Just multiply the number by 2 then affix the zeros.*
4. The answers may vary. – *No matter how many consecutive (trailing) zeroes we have, simply affix it to the product after multiplying the numbers before it.*

Lesson Component 5 (Lesson Conclusion – Reflection/Metacognition on Student Goals)

Time: 5 minutes

The teacher facilitates student reflection and discussion that addresses such questions as:

- What do you think were the key mathematical concepts addressed in this lesson?
- Would you rate your level of understanding of the material covered in this lesson as high, moderate, or low?
- Has the lesson helped you to gain further insight into aspects of the material covered that represent strengths or weaknesses?
- What would you describe as the main barriers, if any, to your ongoing progress and achievement to the topic area addressed in this lesson?
- What do you think would best assist your ongoing progress and achievement in relation to the topic area?

Mathematics Grade 3 Lesson Plan #10

Solves Routine and Non-routine Problems Involving Multiplication without or with Addition and Subtraction of Whole numbers including money using appropriate problem-solving strategies and tools**.**

Key Idea

Multiply, Add, Subtract

Lesson Component 1 (Lesson Short Review)

Time: 7 minutes

Directions: Perform the indicated operation.

1) 37×100

2) 74×5

3) 87×83

4) $8 \times (9 - 5)$

5) $6 \times 3 + 5 \times 4$

Answers

1) 3,700 2) 370 3) 7,221 4) 32 5) 38

Lesson Component 2 (Lesson Purpose/Intention)

Time: 3 minutes

Teacher states:

We can use what we have learned about addition, subtraction, and multiplication. Today we will learn to solve problems involving multiplication with or without addition and subtraction.

Lesson Component 3 (Lesson Language Practice)

Time: 5 minutes

Key words/terms are:

Problem Solving, Multiplication, Addition, Subtraction

Lesson Component 4 (Lesson Activity)

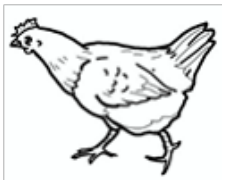
Time: 25 minutes

Part 4A

Stem for Items 1 and 2

Item 1: MJ bought 5 apples which cost ₱ 26 each and 4 oranges which cost ₱ 24.

Item 2: On a farm, there are cows and hens. Each cow has 4 feet, and each hen has 2 feet.



Part 4B

Item 1

Questions

1. How much should MJ pay for 5 apples?
2. How much should MJ pay for 4 oranges?
3. How much should MJ pay for all the fruits he bought?
4. If you buy 15 apples, how much would you pay?
5. If you buy 20 oranges, how much would you pay?

Answers to Item 1

1. ₱ 130
2. ₱ 96
3. ₱ 130 + ₱ 96 = ₱ 226
4. ₱ 390
5. ₱ 480

Part 4C

Item 2

Questions

1. What is the total number of cow's feet if there are 8 cows?
2. What is the total number of hen's feet if there are 12 hens?
3. Count the total number of feet in the farm if there are 8 cows and 12 hens.
4. The total number of cows and hens on the farm is 15, and the total number of feet of cows and hens is 42. How many cows and hens are there?

Answers to Item 2

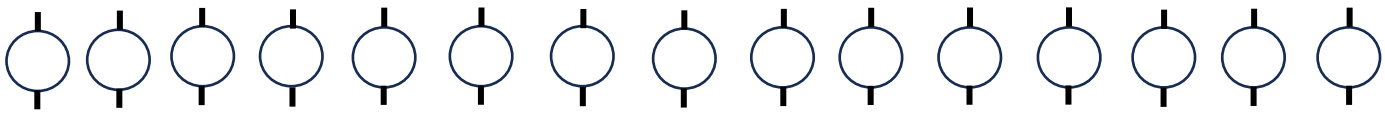
1. A cow has 4 feet and there are 8 cows. So, there are $8 \times 4 = 32$ feet.
2. A hen has 2 feet and there are 12 hens. So, there are $12 \times 2 = 24$ feet.
3. Hence, there are $8 \times 4 + 12 \times 2 = 32 + 24 = 56$ feet in total.
4. We can do a guess and check method or draw and count.

Method 1: Because there are 15 cows and hens in total we just need to try combinations like 4 cows and 11 hens, 5 cows and 10 hens and so on. Until we get a total of 42 feet.

Number of Cows	Number of Hens	Total Cow's Feet	Total Hen's Feet	Total No. of Feet
4	11	$4 \times 4 = 16$	$11 \times 2 = 22$	$16 + 22 = 38$
5	10	$5 \times 4 = 20$	$10 \times 2 = 20$	$20 + 20 = 40$
6	**9**	$6 \times 4 = 24$	$9 \times 2 = 18$	$24 + 18 = 42$

Hence, there are 6 cows and 9 hens.

Method 2: Since there are 15 cows and hens, we just need to draw 15 circles to represent all cows and hens. Then draw 2 feet for each assuming that all are hens as shown.



Observe that there are 30 feet already. To complete the 42 feet, we only need to draw 12 more feet. Since cows have 4 feet, we need to draw 2 feet to some circles until we complete the 12 remaining feet. We have

Notice that the illustration resulted in 6 circles with 4 feet and 9 circles with 2 feet. Therefore, there are 6 cows and 9 hens.

Lesson Component 5 (Lesson Conclusion – Reflection/Metacognition on Student Goals)

Time: 5 minutes

The teacher facilitates student reflection and discussion that addresses such questions as:

- What do you think were the key mathematical concepts addressed in this lesson?
- Would you rate your level of understanding of the material covered in this lesson as high, moderate, or low?
- Has the lesson helped you to gain further insight into aspects of the material covered that represent strengths or weaknesses?
- What would you describe as the main barriers, if any, to your ongoing progress and achievement to the topic area addressed in this lesson?
- What do you think would best assist your ongoing progress and achievement in relation to the topic area?

Mathematics Grade 3 Lesson Plan #11

Visualizes division of numbers up to 100 by 6, 7, 8, and 9 (multiplication table of 6, 7, 8, and 9).

Key Idea

Divide

Lesson Component 1 (Lesson Short Review)

Time: 7 minutes

Instructions: Complete the portion of multiplication table shown below.

Table 6	Table 7	Table 8	Table 9
6 × 6 = _____	7 × 6 = _____	8 × 6 = _____	9 × 6 = _____
6 × 7 = _____	7 × 7 = _____	8 × 7 = _____	9 × 7 = _____
6 × 8 = _____	7 × 8 = _____	8 × 8 = _____	9 × 8 = _____
6 × 9 = _____	7 × 9 = _____	8 × 9 = _____	9 × 9 = _____

Answers

Table 6	Table 7	Table 8	Table 9
6 × 6 = **36**	7 × 6 = **42**	8 × 6 = **48**	9 × 6 = **54**
6 × 7 = **42**	7 × 7 = **49**	8 × 7 = **56**	9 × 7 = **63**
6 × 8 = **48**	7 × 8 = **56**	8 × 8 = **64**	9 × 8 = **72**
6 × 9 = **54**	7 × 9 = **63**	8 × 9 = **72**	9 × 9 = **81**

Lesson Component 2 (Lesson Purpose/Intention)

Time: 3 minutes

Teacher states:

We can use what we have learned about multiplication in today's lesson. Now, we will learn to divide whole numbers up to 100 with divisors 6, 7, 8, or 9.

Lesson Component 3 (Lesson Language Practice)

Time: 5 minutes

Key words/terms are:

Division, Multiplication Table

Lesson Component 4 (Lesson Activity)

Time: 25 minutes

Part 4A

Stem for Items 1 and 2

Item 1: Jboy will share 18 marbles and 6 of his friends want to have it.

Item 2: Alyssa was given a multiplication table and asked to answer the following.

a) 72 ÷ 8
b) 56 ÷ 7
c) 48 ÷ 8

d) $90 \div 9$
e) $54 \div 6$

Part 4B

Item 1

Questions

1. Using 18 real marbles, show the number of marbles that each of his friends will get if all of them will get an equal number of marbles.

2. Using the multiplication table, how many marbles will each of his friends get if all of them will equal number of marbles?

Answers to Item 1

1. The learners/teachers can demonstrate it.

2. Since $6 \times 3 = 18$, then $18 \div 3 = 6$ and $18 \div 6 = 3$. Because Jboy needs to divide the 18 marbles to 6 of his friends, then each of them will get $18 \div 6 = 3$ marbles.

Part 4C

Item 2

Question/Instruction

Using the multiplication table, answer each item.

Answers to Item 2

a) Note that $8 \times 9 = 72$. Hence, $72 \div 8 = 9$.
b) Note that $8 \times 7 = 56$. Hence, $56 \div 7 = 8$.
c) Note that $8 \times 6 = 48$. Hence, $48 \div 8 = 6$.
d) Note that $10 \times 9 = 90$. Hence, $90 \div 9 = 10$.
e) Note that $6 \times 9 = 54$. Hence, $54 \div 6 = 9$.

Lesson Component 5 (Lesson Conclusion – Reflection/Metacognition on Student Goals)

Time: 5 minutes

The teacher facilitates student reflection and discussion that addresses such questions as:

- What do you think were the key mathematical concepts addressed in this lesson?
- Would you rate your level of understanding of the material covered in this lesson as high, moderate, or low?
- Has the lesson helped you to gain further insight into aspects of the material covered that represent strengths or weaknesses?
- What would you describe as the main barriers, if any, to your ongoing progress and achievement to the topic area addressed in this lesson?
- What do you think would best assist your ongoing progress and achievement in relation to the topic area?

Mathematics Grade 3 Lesson Plan #12

Visualizes and States Basic Division Facts of Numbers up to 10.

Key Idea

Divide

Lesson Component 1 (Lesson Short Review)

Time: 7 minutes

Directions: Divide each of the following.

1) If $5 \times 6 = 30$, what is $30 \div 5$?

2) $12 \div 1$

3) $0 \div 7$

4) $8 \div 8$

5) How many times can you subtract 4 from 20 until it reaches zero?

Answers

1) 6

2) 12

3) 0

4) 1

5) 5 times

Lesson Component 2 (Lesson Purpose/Intention)

Time: 3 minutes

Teacher states:

We can use what we have learned about multiplication and subtraction in our next lesson. Today we will learn the basic division facts.

Lesson Component 3 (Lesson Language Practice)

Time: 5 minutes

Key words/terms are:

Division Facts, Nonzero

Lesson Component 4 (Lesson Activity)

Time: 25 minutes

Part 4A

Stem for Items 1 and 2

Item 1: Study and understand the table below.

Dividing any number by one	Zero Divided by Any Nonzero Number	Dividing a Nonzero Number by Itself
$8 \div 1 =$	$0 \div 7 =$	$7 \div 7 =$
$15 \div 1 =$	$0 \div 8 =$	$12 \div 12 =$
$37 \div 1 =$	$0 \div 9 =$	$35 \div 35 =$
$175 \div 1 =$	$0 \div 10 =$	$123 \div 123 =$

1,765 ÷ 1 =	0 ÷ 25 =	3,124 ÷ 3,124 =

Item 2: Nick and Vince were tasked to answer 35 ÷ 7 and to show their solutions on the board.

Nick's solution: Since, 7 × 5 = 35, then 35 ÷ 7 = **5**.

Vince's solution: Using repeated subtraction,

35 – 7 = 28
28 – 7 = 21
21 – 7 = 14
14 – 7 = 7
7 – 7 = 0

Because I subtracted 7 **five times** before the number gets 0 (or less than 7), then 35 ÷ 7 = **5**.

Part 4B

Item 1

Questions

1. What do you observe in column 1?
2. What do you observe in column 2?
3. What do you observe in column 3?
4. Using your observation, answer the following.
   a. 0 ÷ 859 = _____
   b. 10,235 ÷ 10,235 = _____
   c. 98 ÷ 1 = _____

Answers to Item 1

1. If a number is divided by 1, the quotient is equal to the number itself. In symbol, say N is a number, $N \div 1 = N$.

2. If zero is divided by any number that is not zero, the quotient is equal to zero. In symbol, say N is a number, $0 \div N = 0$.

3. If a number that is not zero is divided by itself, the quotient is equal to one. In symbol, say N is a nonzero number, $N \div N = 1$.

4. a. 0 b. 1 c. 98

Part 4C

Item 2

Questions

1. What can you say about Nick's solution?
2. What can you say about Vince's solution?
3. Can you compare their solutions? Which one is easier? Which one is faster?

Answers to Item 2

Answers for numbers 1 to 3 may vary.

Some basic division facts include:
- It can be done using multiplication facts
- It can be done by repeated subtraction
-

Lesson Component 5 (Lesson Conclusion – Reflection/Metacognition on Student Goals)

Time: 5 minutes

The teacher facilitates student reflection and discussion, that addresses such questions as:

- What do you think were the key mathematical concepts addressed in this lesson?
- Would you rate your level of understanding of the material covered in this lesson as high, moderate, or low?
- Has the lesson helped you to gain further insight into aspects of the material covered that represent strengths or weaknesses?
- What would you describe as the main barriers, if any, to your ongoing progress and achievement to the topic area addressed in this lesson?
- What do you think would best assist your ongoing progress and achievement in relation to the topic area?

Mathematics Grade 3 Lesson Plan #13

Divides numbers without or with remainder:
a. 2- to 3-digit numbers by 1- to 2- digit numbers
b. 2- to 3-digit numbers by 10 and 100

Key Idea

Division

Lesson Component 1 (Lesson Short Review)

Time: 7 minutes

Directions: Perform the indicated operation.

1) 64 ÷ 8 =

2) 32 ÷ 4 =

3) 54 ÷ 9 =

4) 45 ÷ 5 =

5) 42 ÷ 6 =

Answers

1) 8 2) 8 3) 6 4) 9 5) 7

Lesson Component 2 (Lesson Purpose/Intention)

Time: 3 minutes

Teacher states:

We can use what we have learned about multiplication and basic division facts in the previous grade level. Today we will learn to divide 2- to 3-digit numbers by 1- to 2-digit numbers with or without remainder.

Lesson Component 3 (Lesson Language Practice)

Time: 5 minutes

Key words/terms are:

Division, Dividend, Divisor, Remainder

Lesson Component 4 (Lesson Activity)

Time: 25 minutes

Part 4A

Stem for Items 1 and 2

Item 1: Teacher Tin told her pupils to divide the following using any method they had learned in the previous lessons.

a) 86 ÷ 2	c) 72 ÷ 6	e) 21 ÷ 8	g) 296 ÷ 8
b) 396 ÷ 3	d) 84 ÷ 12	f) 38 ÷ 12	h) 545 ÷ 15

Item 2: Teacher Flor told her pupils to divide these numbers with or without using scratch paper.

- 580 ÷ 10
- 900 ÷ 100
- 673 ÷ 10
- 759 ÷ 100

Part 4B

Item 1

Questions/Instructions

1) If you are a pupil of teacher Tin, what will be your answer to each of the given item?

2) Are there any items having remainders? What are they?

3) Is it possible to have a remainder that is greater than the divisor?

Answers to Item 1

Use long division to answer some items.

1) a. 43 c. 12 e. 2 r.5 g. 37

b. 132 d. 7 f. 3 r.2 h. 36 r.5

2) Yes, e, f and h.

3) No

Part 4C

Item 2

Questions

1) Can you give the answer mentally?

2) If you were able to do it, how did you do it?

Answers to Item 2

1. a. 58 b. 9 c. 67 r.3 d. 7 r.59
2. Answers may vary. Here is a possible way.

In 759 ÷ 100, the divisor has **2** zeroes. So, we need to separate/remove the **last two digits** of 759 making it 7 and 59. The remaining digits is the quotient, and the last two digits is the remainder. Thus, 759 ÷ 100 = 7 r.59.

Lesson Component 5 (Lesson Conclusion – Reflection/Metacognition on Student Goals)

Time: 5 minutes

The teacher facilitates student reflection and discussion, that addresses such questions as:

- What do you think were the key mathematical concepts addressed in this lesson?
- Would you rate your level of understanding of the material covered in this lesson as high, moderate, or low?
- Has the lesson helped you to gain further insight into aspects of the material covered that represent strengths or weaknesses?
- What would you describe as the main barriers, if any, to your ongoing progress and achievement to the topic area addressed in this lesson?
- What do you think would best assist your ongoing progress and achievement in relation to the topic area?

Mathematics Grade 3 Lesson Plan #14

Point, Line, Line segment and Ray

Key Idea

Recognizes and draws a point, line, line segment and ray.
(Pagkilala at Pagguhit ng mga Points, Linya, Line Segments at Ray)

Lesson Component 1: (Lesson Short Review)
Bahagi ng Aralin 1: (Maikling Pagsusuri sa Aralin)

Time: 7 mins.
Oras: 7 minuto.

PRE-TEST
Directions: Observe the image below. Identify the point, line, line segment, and ray.
(**Panuto**: Tingnan ang larawan sa ibaba. Alamin ang mga point, line, line segment at ray.)

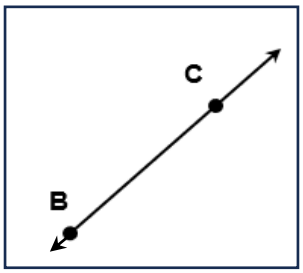


Figure 1
Larawan 1

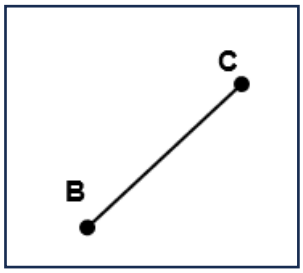


Figure 2
Larawan 2

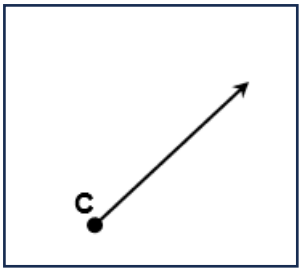


Figure 3
Larawan 3

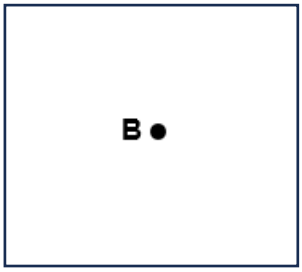


Figure 4
Larawan 4

Question 1: Which term describes figure 1?
Tanong 1: Aling salita ang naglalarawan sa figure 1?

a. Line b. Line segment c. Ray d. Point

Question 2: Which term describes figure 2?
Tanong 2: Aling salita ang naglalarawan sa figure 2?

a. Line b. Line segment c. Ray d. Point

Question 3: Which term describes figure 3?
Tanong 3: Aling salita ang naglalarawan sa figure 3?

a. Line b. Line segment c. Ray d. Point

Question 4: Which term describes figure 4?
Tanong 4: Aling salita ang naglalarawan sa figure 4?

a. Line b. Line segment c. Ray d. Point

Answers:
Sagot:

Q1. A Q2. B Q3. C Q4. D

Component 2: (Lesson Purpose/Intention)
Bahagi 2: (Layunin ng Aralin)

Time: 3 mins.
Oras: 3 minuto.

Teacher states:

- *For us to embark on the understanding of points, lines, line segments, and rays, we will explore into the field of geometric concepts. Our journey includes exploring the definitions and properties of these fundamental elements, offering a hands-on approach to visualizing their characteristics through drawing and identification exercises. Through this process, we aim to deepen our understanding of geometric concepts, develop spatial reasoning skills, and apply appropriate strategies to analyze and solve geometric problems in various contexts.*

- *Upang tayo'y mag-umpisa sa pag-unawa ng mga point, line, line segment, at ray, tayo ay titingin sa larangan ng mga konsepto sa Geometry. Ang ating paglalakbay ay maglalaman ng pagtuklas sa mga kahulugan at katangian ng mga pangunahing elementong ito, na nag-aalok ng praktikal na paraan sa pag-visualize ng kanilang mga katangian sa pamamagitan ng mga gawaing pagguhit at pagkilala sa mga ito. Sa pamamagitan ng prosesong ito, layunin nating palalimin ang ating pag-unawa sa mga konsepto ng Geometry, lumago sa ating kakayahan sa spatial reasoning, at mag-aplay ng angkop na mga paraan sa pagsusuri at paglutas ng mga problemang Geometry sa iba't ibang konteksto.*

Component 3: (Lesson Language Practice)
Bahagi 3: (Pagsasanay sa Wika ng Aralin)

Time: 5 mins.
Oras: 5 minuto.

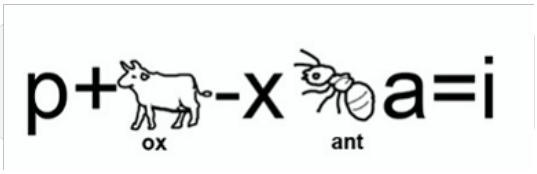
Keywords/terms are:
Pangunahing Salita:

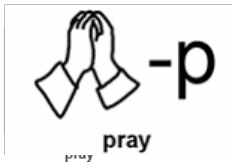
Point, line, line segment, and ray.

Activity 3: Rebus Puzzle: Geometry Challenge

Instructions: Decode the following Rebus puzzles to reveal terms related to Geometry Challenge. Each puzzle represents a single term.

***(Tagubilin:** Alamin ang mga sumusunod na Rebus puzzle upang makita ang mga salitang may kaugnayan sa Geometry Challenge. Bawat puzzle ay kumakatawan sa isang salita.)*





Processing Questions:

1. What strategies did you use to decode the geometric concepts in the Rebus puzzles?
   Anong mga pamamaraan ang ginamit mo upang matukoy ang mga konseptong geometric sa Rebus puzzles?
2. Which geometric concepts were the most challenging to understand? Why?
   Aling mga konseptong geometric ang pinakamahirap unawain? Bakit?
3. How do these geometric concepts relate to managing shapes and making decisions related to geometry?
   Paano nauugnay ang mga konseptong geometric na ito sa pag-manage ng mga hugis at paggawa ng mga desisyong may kaugnayan sa geometry?
4. Can you provide real-life examples or situations where you might encounter these geometric concepts?
   Paano nauugnay ang mga konseptong geometric na ito sa pag-manage ng mga hugis at paggawa ng mga desisyong may kaugnayan sa geometriya?

What is a Point?
It is the exact position or location on a plane surface. The dot (•) represents a point. It can be named with a letter. For example: Point A, which can be written in a figure as (• A).
Ano nga ba ang Point? Ito ay ang eksaktong posisyon o lokasyon sa isang plane surface. Ang tuldok o dot (•) ay kumakatawan sa point. Ito'y maaaring pangalanan ng letra. Halimbawa: Point A, ito'y maaring isulat sa figure na ito (• A)

What is a Line?
The figure with two arrowheads at both ends is called a line. A Line may extend endlessly in both directions.
Ano nga ba ang Linya (Line)? Ang figure na ito na may dalawang arrowhead sa magkabilang dulo ay tinatawag na linya (line). Ang Linya (Line) ay maaaring lumawig ng walang katapusan sa magkabilang dulo.

What is a Line Segment?
A line segment is a part of a line with two endpoints. It cannot extend endlessly in any direction.
Ano nga ba ang Line Segment? Ang line segment ay bahagi ng linya na may dalawang endpoint. Hindi ito maaaring lumawig ng walang katapusan sa anumang direksyon.

What is a Ray?
A ray is a part of a line consisting of one endpoint and an arrowhead that can extend endlessly in any direction.

Ano nga ba ang Ray?Ang ray ay bahagi ng linya na binubuo ng isang endpoint at arrowhead na maaring lumawig ng walang katapusan sa anumang direksyon.

Component 4*:* (Lesson Activity)
Bahagi 4: (Gawain sa Aralin)

Time: 25 mins.
Oras: 25 minuto*.*

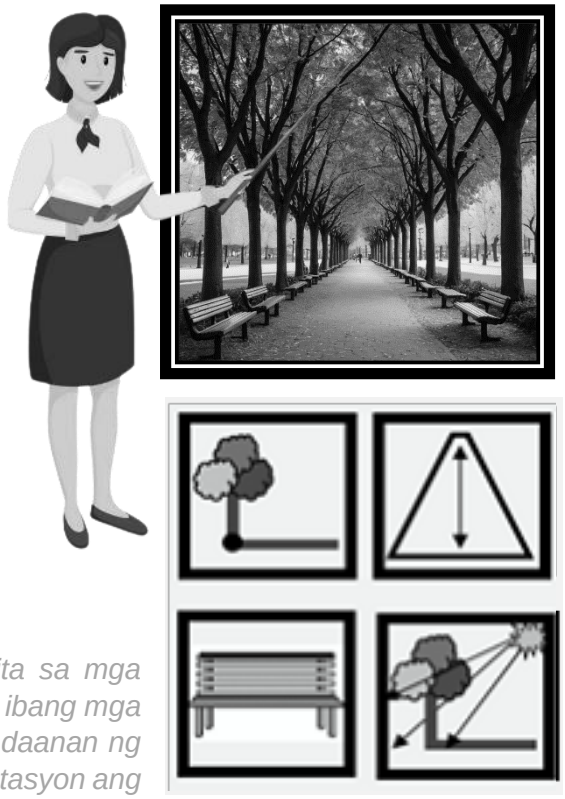
Component 4A

- Read the scenario titled: ‘Exploring Geometry in the Park: A Grade 3 Adventure’. The learner’s task is to identify and recognize points, lines, line segments, and rays. After you have completed the activity, explain your answers in a few sentences, providing reasoning for your identification of each geometric element.

EXPLORING GEOMETRY IN THE PARK: A GRADE 3 ADVENTURE"

In their mathematics class, Grade 3 students are learning about basic geometric shapes and their properties. Ms. Reyes, their teacher, wants to engage them in a fun activity to reinforce their understanding of points, lines, line segments, and rays.

Sa kanilang klase sa matematika, ang mga mag-aaral sa Ikatlong Baitang ay nag-aaral tungkol sa mga batayang hugis-geometriko at ang mga katangian nito. Ang Guro na si Bb. Reyes, ay nais na mapasaya sila sa isang masayang aktibidad upang palakasin ang kanilang pag-unawa sa mga points, lines, line segments, and rays.



Ms. Reyes begins by showing the students a picture of a park. She points to various elements in the picture, such as trees, benches, and pathways, and explains how these elements can be represented using geometric concepts.

Nagsimula si Bb. Reyes sa pamamagitan ng pagpapakita sa mga mag-aaral ng larawan ng isang parke. Itinuro niya ang iba't ibang mga elemento sa larawan, tulad ng mga puno, upuan, at mga daanan ng tao, at ipinaliwanag kung paano maaaring maging representasyon ang mga elemento gamit ang mga konsepto sa Geometry.

She draws attention to a tree and asks the students to identify the point where the tree trunk meets the ground. She explains that this point is called the base of the tree, which can be represented as a point in geometry.

Itinuro niya ang isang puno at tinanong ang mga mag-aaral kung maaari nilang matukoy ang point kung saan nagtatagpo ang tangkay ng puno sa lupa. Ipinaliwanag niya na ito ay maaaring mai-representa bilang isang point sa Geomtery.

Next, she points to a pathway in the park and asks the students to imagine extending the pathway indefinitely in both directions. She explains that this represents a line, which is a straight path that goes on forever in both directions.

Kasunod nito, itinuro niya ang isang daanan sa parke at tinanong ang mga mag-aaral na isipin na mapalawak ang daanan sa parehong direksyon. Ipinaliwanag niya na ito ay kumakatawan sa isang linya, na isang tuwid na daanan na patuloy na nagpapatuloy sa parehong direksyon.

Ms. Reyes then focuses on a bench along the pathway and asks the students to identify the part of the bench that forms a straight path. She explains that this is a line segment, which is a part of a line with two endpoints.

Pagkatapos, inilabas niya ang isang upuan sa gilid ng daanan at tinanong ang mga mag-aaral na matukoy ang bahagi ng upuan na bumubuo ng isang tuwid na linya. Ipinaliwanag niya na ito ay isang line segment, na isang bahagi ng isang linya na may dalawang dulo.

Lastly, she points to the sunlight shining through the trees and asks the students to imagine the rays of sunlight extending from the sun to the ground. She explains that these are rays, which start at a point and go on forever in one direction.

Sa huli, itinuro niya ang sinag ng araw na sumisinag sa gitna ng mga puno at tinanong ang mga mag-aaral na isipin na mag-extend ang mga ray ng araw mula sa araw patungo sa lupa. Ipinaliwanag niya na ang mga ito ay mga rays, na nagsisimula sa isang point at patuloy na nagpapatuloy sa isang direksyon.

Component 4B

Guide Questions:
Mga Gabay na Tanong:
Given the above scenario, learners can recognize and draw point, line, line segment and ray:
Ayon sa nabanggit na sitwasyon, matutukoy at masusulat ng mga mag-aaral ang point, line, line segment at ray.

Q1. Based on the above scenario, what are the things used to represent or symbolize the point, line, line segment, and ray?
Batay sa nabanggit na sitwasyon ano-ano ang mga bagay na ginamit na kumakatwan o sumisimbolo sa mga point, line, line segment at ray?

Q2. Aside from the mentioned items representing point, line, line segment, and ray, do you have any other examples based on the above scenario/picture? If not, can you provide other examples that you can see in the environment?
Bukod sa mga nabanggit na mga bagay na kumakatawan sa point, line, line segment at ray, mayroon ka pa bang nakikitang mga halimbawa nito na base sa larawan? Kung wala, maaari ka bang magbigay ng iba pang halimba nito na nakikita mo sa iyong kapaligiran.

Q3. How can you apply your knowledge of geometric concepts in creating pictures or scenes in real life?
Paano ninyo magagamit ang inyong kaalaman sa mga konseptong geometry sa pagbuo ngmga larawan o eksena sa tunay na buhay?

Answers:

Q1: Point: The base of the tree where the trunk meets the ground.

Line: The pathway in the park, extending indefinitely in both directions.

Line Segment: The part of the bench forming a straight path.

Ray: The rays of sunlight shining through the trees.

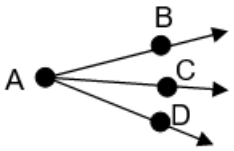
Q2: Tip of a leaf, Edge of a table, Horizon line in a landscape, A segment of a road, Shadow cast by an object

Star in the sky, Tip of a needle, Hairline, etc.

Q3: Using points, lines, line segments, and rays to depict objects and elements accurately in their drawings or artwork. Incorporating geometric shapes and concepts to design and layout scenes or landscapes realistically. Understanding spatial relationships and proportions to create balanced and visually appealing compositions in their artwork.

Component 4C

Directions: A. Refer to the figure on the right. Identify and write the rays in it. Write your answer in the space provided.
Panuto: *Tingnan ang figure sa kanan. Tukuyin at isulat ang mga ray na nakikita dito. Isulat ang iyong sagot sa patlang na ibinigay.*

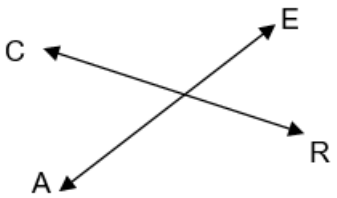


1. _____
2. _____
3. _____

B. Identify the line segments in the figure and write its name on the spac
*Tukuyin ang mga **line segment** na makikita sa **figure at** isulat ito sa patl*

4. _____
5. _____
6. _____
7. _____

C. Identify and name the lines in the figure.
Sabihin ang mga linya (line) na makikita sa figure



8. _____
9. _____

D. Draw a street intersection using letters D, E F, G and H and name the following: Line segment and Point.

Gumuhit ng isang intersection gamit ang mga titik D, E, F, G, at H at tukuyin ang sumusunod:, Segmented na Linya, at Points.

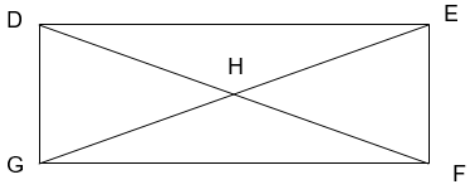
Answers:

A. Ray AB or $\overrightarrow{AB}$
Ray AC or $\overrightarrow{AC}$
Ray AD or $\overrightarrow{AD}$

B. $\overline{MA}$ or $\overline{AM}$
$\overline{MH}$ or $\overline{HM}$
$\overline{HT}$ or $\overline{TH}$
$\overline{AT}$ or $\overline{TA}$

C. Line AE or EA , $\overleftrightarrow{AE}$ or $\overleftrightarrow{EA}$
Line CR or RC, $\overleftrightarrow{CR}$ or $\overleftrightarrow{RC}$

B.



Note: Answers may vary depending on the placement of points.

$\overline{DH}$ $\overline{HF}$ $\overline{DF}$ $\overline{EH}$ $\overline{HF}$ $\overline{EF}$ $\overline{DE}$ $\overline{DG}$ $\overline{FE}$
$\overline{GH}$ $\overline{HE}$ $\overline{GE}$ $\overline{FH}$ $\overline{HD}$ $\overline{DF}$ $\overline{GF}$

Component 5: Lesson Conclusion

Time: 5 mins.

- As we conclude this lesson, it's important to reflect on the valuable skills we've developed. We have navigated through the complexities of recognizing and drawing points, lines, line segments and rays.
- Initiate a Reflective Discussion by asking open-ended questions like, "*What was the most important concept you learned today?*" or "*How can you apply today's lesson in real-life situations?" Encourage students to think about how the lesson connects to practical scenarios.*
- Encourage self-assessment by asking, "*What did you find challenging about this lesson, and how did you overcome it?" or "What skill do you feel you improved the most?"*
- Conclude the session by summarizing the key takeaways of the lesson, highlighting how each point contributes to a broader understanding of mathematics and its application. Let the learners enumerate their knowledge gained from the lesson.

Mathematics Grade 3 Lesson Plan #15

Perpendicular, Parallel and Intersecting Lines

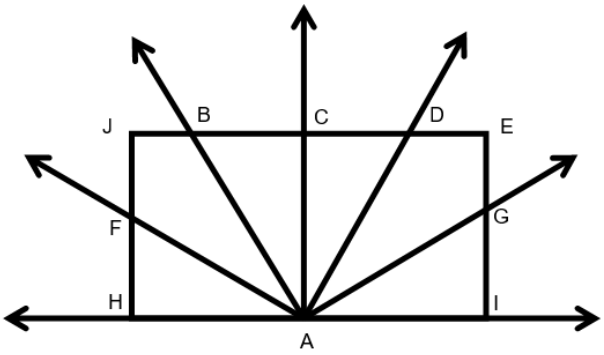
Key Idea

Recognizes and draws parallel, intersecting, and perpendicular lines.
(Nakakakilala at nagguhit ng parehong, nagtutunggali, at nangtuwirang mga linya.)

Lesson Component 1: (Lesson Short Review)
Bahagi ng Aralin 1: (Maikling Pagsusuri sa Aralin)

Time: 7 mins.
Oras: 7 minuto.

Directions: Observe the image below. Identify the point, line, line segment, and ray.
(**Panuto**: Tingnan ang larawan sa ibaba. Alamin ang mga point, line, line segment at ray.)



Answer:
Sagot:

Points: A, B, C, D, E, F, G, H, I, and J

Rays: $\overrightarrow{AB}$, $\overrightarrow{AC}$, $\overrightarrow{AD}$, $\overrightarrow{AG}$, $\overrightarrow{AI}$, $\overrightarrow{AH}$, $\overrightarrow{AF}$

Line: $\overleftrightarrow{HI}$ *or* $\overleftrightarrow{IH}$

Line Segment: $\overline{AB}$, $\overline{AC}$, $\overline{AD}$, $\overline{AF}$, $\overline{AI}$, $\overline{AH}$, $\overline{BA}$, $\overline{CA}$, $\overline{DA}$, $\overline{FA}$, $\overline{IA}$, $\overline{HA}$, $\overline{GA}$, $\overline{AG}$,

Component 2: (Lesson Purpose/Intention)
Bahagi 2: (Layunin ng Aralin)

Time: 3 mins.
Oras: 3 minuto.

Teacher states:

- *For us to understand the parallel, intersecting, and perpendicular lines, we will explore into the field of geometric concepts. Our journey includes exploring the definitions and properties of these fundamental elements, offering a hands-on approach to visualizing their characteristics through drawing and identification exercises. Through this process, we aim to deepen our understanding of geometric concepts, develop spatial reasoning skills, and apply appropriate strategies to analyze and solve geometric problems in various contexts.*

- *Upang tayo'y mag-umpisa sa pag-unawa ng mga parallel, intersecting and perpendicular lines, tayo ay titingin sa larangan ng mga konsepto sa Geometry. Ang ating paglalakbay ay maglalaman ng pagtuklas sa mga kahulugan at katangian ng mga pangunahing elementong ito, na nag-aalok ng praktikal na paraan sa pag-visualize ng kanilang mga katangian sa pamamagitan ng mga gawaing pagguhit at pagkilala sa mga ito. Sa pamamagitan ng prosesong ito, layunin nating palalimin ang ating pag-unawa sa mga konsepto ng Geometry, lumago sa ating kakayahan sa spatial reasoning, at mag-aplay ng angkop na mga paraan sa pagsusuri at paglutas ng mga problemang Geometry sa iba't ibang konteksto.*

Component 3: (Lesson Language Practice)
Bahagi 3: (Pagsasanay sa Wika ng Aralin)

Time: 5 mins.
Oras: 5 minuto.

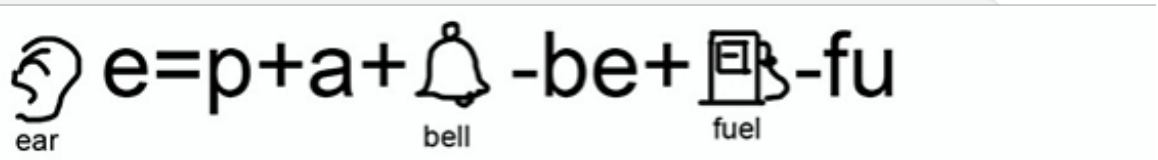
Keywords/terms are:
Pangunahing Salita:

Parallel. Intersecting and Perpendicular lines

Activity 3: "Line Puzzlers: Crack the Rebus Code!"

Instructions: Decode the following Rebus puzzles to reveal terms related to Geometry Challenge. Each puzzle represents a single term.

***(Tagubilin:** Alamin ang mga sumusunod na Rebus puzzle upang makita ang mga salitang may kaugnayan sa Geometry Challenge. Bawat puzzle ay kumakatawan sa isang salita.)*

1. 

2. 

3. 

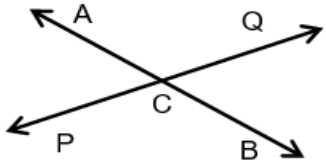
4. 

Processing Questions:

5. What strategies did you use to decode the Line Puzzlers: Crack the Rebus Code Activity?
   Anong mga pamamaraan ang ginamit mo upang matukoy ang line puzzlers sa Rebus puzzles?

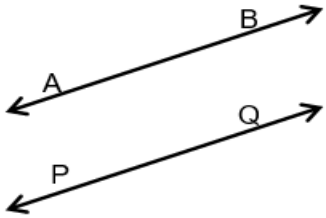
6. Which term in the Line Puzzlers was the most challenging to understand? Why?
   Aling mga konseptong sa Line Puzzlers Activity ang pinakamahirap unawain? Bakit?

7. How do these terms relate to managing shapes and making decisions related to geometry?
   Paano nauugnay ang mga konseptong geometric na ito sa pag-manage ng mga hugis at paggawa ng mga desisyong may kaugnayan sa geometry?
8. Can you provide real-life examples or situations where you might encounter these geometric concepts?
   Paano nauugnay ang mga konseptong geometric na ito sa pag-manage ng mga hugis at paggawa ng mga desisyong may kaugnayan sa geometriya?



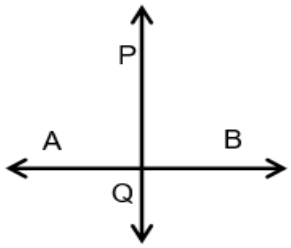
INTERSECTING LINES - lines that cross each other.

AB Intersects PQ at C



PARALLEL LINES - lines that do not meet at any point.

$AB \parallel PQ$



PERPENDICULAR LINES - lines that do cross and form a right angle.

$PQ \perp AB$

Component 4*:* (Lesson Activity)
Bahagi 4: (Gawain sa Aralin)

Time: 25 mins.
Oras: 25 minuto*.*

Component 4A

- Read the scenario titled: 'Exploring Geometry in the Park: A Grade 3 Adventure.'. The learner's task is to identify and recognize points, lines, line segments, and rays. After you have completed the activity, explain your answers in a few sentences, providing reasoning for your identification of each geometric element.

EXPLORING GEOMETRY IN THE PARK: A GRADE 3 ADVENTURE

As Elmo walks through his neighborhood on the way to school, he notices many interesting things around him. He stops to admire a house with windows and doors neatly aligned in straight lines, resembling the ruled lines on his notebook paper. Continuing his journey, Elmo observes rows of buildings where the windows intersect, creating patterns akin to a game of tic-tac-toe. His attention then turns to an electric post adorned with wires crisscrossing in various directions, forming an intriguing pattern against the sky. Across the street, Elmo spots a pedestrian lane with evenly spaced lines on the ground, guiding pedestrians safely along

on the ground, guiding pedestrians safely along their path. Arriving at school, Elmo reflects on the geometric wonders he encountered and eagerly anticipates sharing his discoveries with classmates during their geometry lesson.

Habang si Elmo ay naglalakad sa kanilang barangay patungo sa paaralan, napansin niya ang maraming nakakagulat na bagay sa paligid. Huminto siya upang tignan ang isang bahay na may mga bintana at pinto na may mga tuwid na linya na magkakatabi, na katulad ng mga guhit sa kanyang notebook. Nakikita niya ang mga hanay ng mga gusali kung saan nagtatagpo ang mga bintana, na lumilikha ng mga hugis na tulad ng laro ng tic-tac-toe. Pagkatapos, napansin niya ang isang poste ng kuryente na may mga kawad na nagbabalik-balik sa iba't ibang direksyon, na lumilikha ng isang kakaibang disenyo laban sa langit. Sa kabilang kalsada, nakita ni Elmo ang isang tawiran para sa mga tumatawid na may mga tuwid na guhit sa lupa, na tumutulong sa mga taong maglakad nang ligtas. Pagdating sa paaralan, nag-iisip si Elmo tungkol sa lahat ng mga nakakagulat na linya na kanyang nakita at hindi na siya makapaghintay na ibahagi ang kanyang mga natuklasan sa kanyang mga kaklase sa kanilang aralin sa heometriya.

Component 4B

Guide Questions:

Mga Gabay na Tanong:

Given the above scenario, learners can recognize and draw parallel, intersecting and perpendicular lines:

Ayon sa nabanggit na sitwasyon, matutukoy at masusulat ng mga mag-aaral ang parallel,intersecting and perpendicular lines.

Q1. What shapes and objects did elmo see while walking to school, and how were they different from each other?

Ano-anong mga hugis at bagay ang Nakita ni elmo habang naglalakad patungo sa paaralan, at paano sila magkaiba sa isa't isa?

Q2. Can you find examples of lines that look like they go straight together, cross each other, or meet at right angles? How do you know if they are parallel, intersecting, or perpendicular?

Makahanap ka ba ng mga halimbawa ng mga linya na tila naaayon, nagtatagpo, o nagtatagpo sa tamang anggulo? Paano mo nalalaman na sila ay parelel, nagtatagpo, o perpendicular?

Q3. How do the lines you saw on houses, buildings, electric posts, and pedestrian lanes help people stay safe or understand where to go?

Paano nakakatulong ang mga linya na iyong nakita sa mga bahay, gusali, poste ng kuryente, at mga tawiran para sa mga tao na manatiling ligtas o maunawaan kung saan sila pupunta?

Answers:

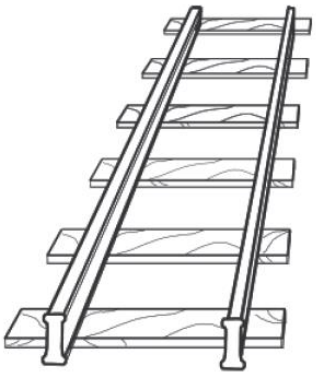
1. *Habang naglalakad patungo sa paaralan, nakita ni Elmo ang mga sumusunod na hugis at bagay:*
   - *Bahay na may mga tuwid na linya para sa mga bintana at pinto.*
   - *Mga hanay ng mga gusali na may tuwid at nagtatagpong mga linya sa mga bintana.*
   - *Poste ng kuryente na may perpendicular lines at kawad na nagbabalik-balik.*
   - *Pedestrian lane na may mga tuwid na guhit sa lupa para sa mga tumatawid.*
2. *Halimbawa ng mga linya:*
   - *Para sa parelel: Ang mga linya ng mga bintana at pinto ng bahay.*
   - *Para sa nagtatagpong: Ang mga linya sa mga bintana ng mga gusali.*
   - *Para sa perpendicular: Ang mga linya sa tawiran para sa mga tumatawid.*

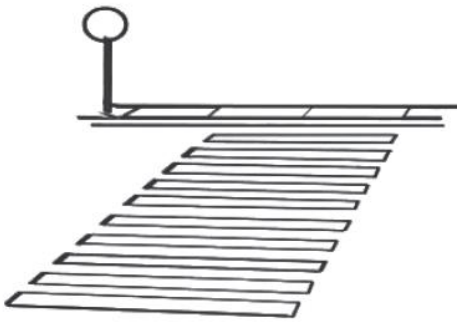
   Nasasabi ito batay sa pagkakatagpo o pagkakalayo ng mga linya.
3. *Ang mga linya sa mga bahay, gusali, poste ng kuryente, at tawiran ay tumutulong sa mga tao na manatiling ligtas at maunawaan kung saan sila pupunta:*
   - *Ang mga linya sa tawiran ay nagtuturo kung saan dumaan ang mga pedestrian.*
   - *Ang mga linya sa mga bintana at mga poste ng kuryente ay nagbibigay ng kaayusan at patern na nakakatulong sa pag-unawa ng kapaligiran.*
   - *Ang mga linya sa mga gusali ay nagbibigay ng estetikong hugis at disenyo sa mga istraktura.*

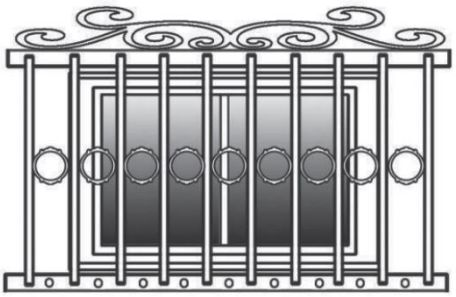
Component 4C

Directions: A. Determine whether the lines in the given pictures are parallel, perpendicular and intersecting lines.

Panuto: Kilalanin ang uri ng mga linyang ipinakikita sa bawat larawan. Isulat kung ito ay parallel, perpendicular, o intersecting. Isulat ang sagot sa inyong sagutang papel



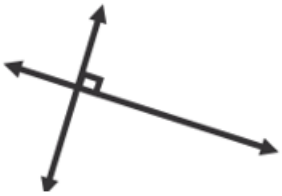




_____ _____ _____

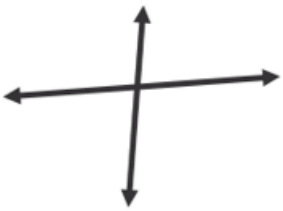
B. Determine whether the given lines are parallel, intersecting or perpendicular.
Kilalanin ang uri ng bawat pares ng linya sa bawat bilang. Isulat kung ito ay parallel, intersecting, o perpendicular

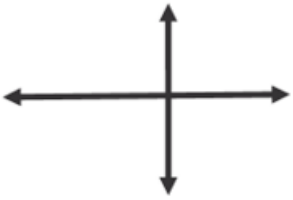
1) 

3) 

5) 

2) 

4) 

6) 

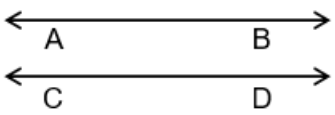
C. Draw or create a line that satisfies the given statements.
Gumuhit o lumikha ng mga linya na tumutugma sa mga sumusunod na pahayag.

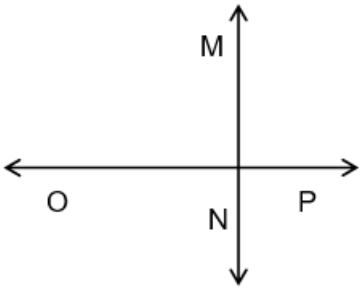
1. Line AB is parallel to line CD.
2. Line MN is perpendicular to line OP.
3. Line ST is intersecting to XY.

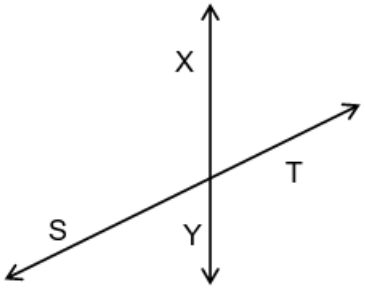
Answers:

A. Intersecting lines, parallel lines and Perpendicular lines
B. 1. Intersecting lines
2. Parallel lines
3. Perpendicular lines
4. Intersecting lines
5. Parallel lines
6. Perpendicular lines

C.







Note: Answers may vary.

Component 5: Lesson Conclusion

Time: 5 mins.

- As we conclude this lesson, it's important to reflect on the valuable skills we've developed. We have navigated through the complexities of recognizing and drawing parallel, intersecting and perpendicular lines.
  Sa ating pagtatapos ng aralin na ito, mahalaga na magbalik-tanaw tayo sa mga mahahalagang kasanayang ating natutunan. Natinahak natin ang mga kumplikadong aspeto ng pagkilala at pagguhit ng mga parallel, intersecting, and perpendicular lines.

- Initiate a Reflective Discussion by asking open-ended questions like, "*What was the most important concept you learned today?*" or "*How can you apply today's lesson in real-life situations?" Encourage students to think about how the lesson connects to practical scenarios.*
- *Simulan ang isang Mapanuriang Talakayan sa pamamagitan ng pagtatanong ng mga bukas na tanong tulad ng, "Ano ang pinakamahalagang konsepto na iyong natutunan ngayon?" o "Paano mo ma-aapply ang aralin ngayon sa mga tunay na buhay?" Inihikayat ang mga mag-aaral na mag-isip kung paano ang aralin ay may kinalaman sa praktikal na mga senaryo.*
- Encourage self-assessment by asking, "*What did you find challenging about this lesson, and how did you overcome it?" or "What skill do you feel you improved the most?"*
  Itaguyod ang self-assessment sa pamamagitan ng pagtatanong, "Ano ang nahirapang bahagi ng araling ito, at paano mo ito nalampasan?" o "Anong kasanayan ang pakiramdam mo ay pinakamalinis mo?"

- Conclude the session by summarizing the key takeaways of the lesson, highlighting how each point contributes to a broader understanding of mathematics and its application. Let the learners enumerate their knowledge gained from the lesson.
  Tapusin ang sesyon sa pamamagitan ng pagsusuri ng mga pangunahing aral ng aralin, at pagbibigay-diin kung paano bawat punto ay nag-aambag sa mas malawak na pang-unawa sa matematika at ang pag-aapply nito.

Mathematics Grade 3 Lesson Plan #16

Congruent Line Segment

Key Idea

Visualizes, identifies, and draws congruent line segments.

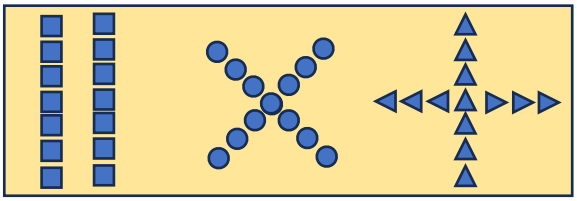
Lesson Component 1: (Lesson Short Review)

Time: 7 mins.

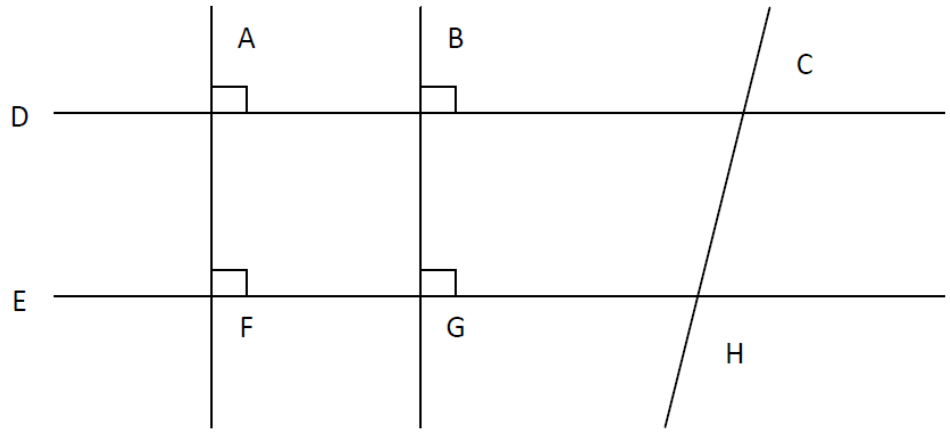
Drill

Give each pupil cut-outs of squares, circles, and triangles. Ask them to form perpendicular, parallel, and intersecting lines by pasting the cut-outs on manila paper.
Panuto: Bigyan ang bawat mag-aaral ng mga piraso ng parisukat, bilog, at tatsulok. Hilingin sa kanila na bumuo ng mga pahalang, magkasabay, at nagtatagpong mga linya sa pamamagitan ng pagkakapit ng mga piraso ng papel sa manila paper.

Output:



Review
Directions: Study the drawing and tell whether the statements are true or false.
Panuto: Pag-aralan ang larawan at sabihin kung ang mga pahayag ay totoo o mali.



1. Line AB is perpendicular to line BG.
2. Line BD is perpendicular to line AB.
3. Line CH intersect line AB and FG.
4. Line AF is perpendicular to line EG.
5. Line DB is perpendicular to line EG.

Answers:

1. True
2. False
3. True
4. True
5. False

Component 2: (Lesson Purpose/Intention)

Time: 3 mins.

Teacher states:

- *"For us to embark on the concept of congruent line segments, we will delve into the realm of geometric exploration. Our journey includes identifying and understanding the properties of congruent line segments, solving problems to deepen our understanding. We will take a hands-on approach, drawing and visualizing congruent line segments to develop a keen sense of geometric precision. Through this process, we aim to sharpen our problem-solving skills in geometry, apply appropriate strategies, and navigate various scenarios involving congruent line segments in real-world contexts."*
- *Upang simulan ang konsepto ng mga congruent line segment, tayo ay maglalakbay sa larangan ng geometry. Ang ating paglalakbay ay kinabibilangan ng pagkilala at pag-unawa sa mga katangian ng mga congruent line segment, paglutas ng mga suliranin upang palalimin ang ating pag-unawa. Haharapin natin ito sa pamamagitan ng pagguhit at pagpapakita ng mga congruent line segment upang malinang ang ating kasanayan sa geometry. Sa pamamagitan ng prosesong ito, layunin nating mapabuti ang ating mga kakayahan sa paglutas ng mga suliranin sa geometry, magamit ang angkop na mga paraan, at harapin ang iba't ibang mga sitwasyon na may kinalaman sa mga congruent line segment sa pangaraw-araw na buhay.*

Component 3: (Lesson Language Practice)

Time: 5 mins.
Keywords/terms are:
Line, Line Segment, Congruent, Length, Measure, and Equal
Activity 3: Line Segment Puzzle: Geometric Search!

Instructions: Find and encircle the important words in this lesson listed below. These may be arranged horizontally, vertically, or diagonally.

R	D	R	C	K	C	H	G	U	L	A	L	M	S
P	Q	J	O	W	A	Z	T	I	G	M	A	G	S
B	D	U	N	W	P	C	N	G	Y	M	A	K	I
T	Z	Q	G	I	W	E	L	B	N	M	N	K	B
Y	A	U	R	O	O	O	O	T	X	E	Z	Z	B
F	A	N	U	G	E	L	N	G	N	S	L	W	U
Y	R	O	E	B	B	E	W	K	S	I	X	Q	Y
J	K	R	N	D	M	I	N	E	P	W	I	A	C
G	U	O	T	G	C	O	C	N	F	I	H	A	D
Q	Q	O	E	T	A	T	P	I	R	H	F	F	F
X	I	S	P	V	H	B	E	L	E	Q	U	A	L

Z	C	T	W	E	R	U	S	A	E	M	M	B	H

Congruent Line Measure

Length Line Segment Equal

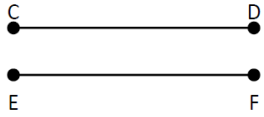
Line segments are congruent if they have the same length and measurement.

Component 4*:* (Lesson Activity)

Time: 25 mins.

Component 4A

A. The teacher draws line segments having the same length.
Ang guro ay gumuhit ng mga line segments na may parehong haba.



Let the pupils measure the line segments with the use of string and ruler.
Pahintulutan ang mga mag-aaral na sukatin ang mga line segment gamit ang string at ruler.

- What can you say about the two-line segments? Do they have the same length? What is the other word for “the same length”? How do we write “line segment CD is congruent to line segment EF” in symbol? $\overline{CD} \cong \overline{EF}$

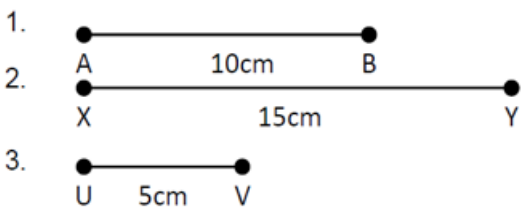
Ano ang masasabi mo tungkol sa dalawang line segment? Pareho ba ang haba nila? Ano ang ibang salita para sa "parehong haba"? Paano natin isusulat ang "line segment CD ay congruent sa line segment EF" sa simbolo?

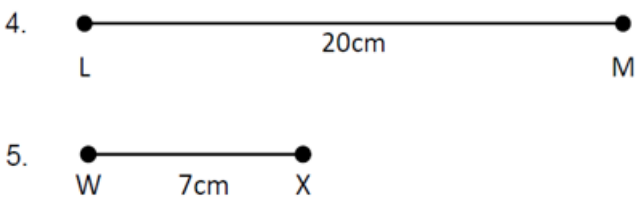
B. Show a rectangle.
Magpakita ng larawan ng Parisukat.

Using the ruler, ask a pupil to measure the sides of the rectangle. Which segments are of the same length?

Ipakita ang isang tatsulok. Gamit ang ruler, itanong sa isang mag-aaral na sukatin ang mga gilid ng rektanggulo. Aling mga segmento ang parehong haba?

C. Using a ruler, make line segments congruent to the line segments in each number.
Gamit ang ruler, gumuhit ng mga linya na congruent sa mga line segment sa bawat numero.

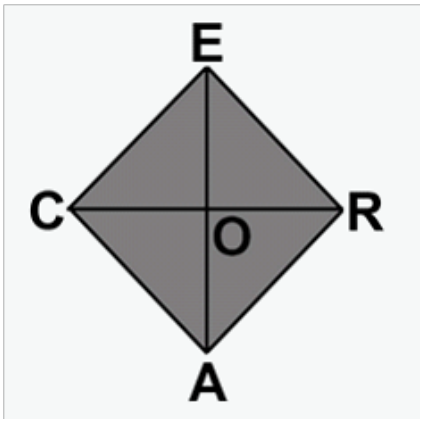




Component 4B

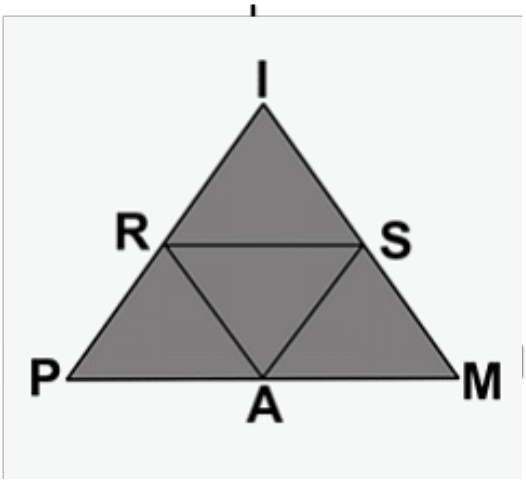
Directions: *Answer the following. (Pair Share)*
Panuto: Sagutan ang mga sumusunod:

A. Name all the line segments you can find in the figure.
Isulat ang pangalan ng line segment na makikita sa larawan sa ibaba.



Name of Line Segment: _____

B. How many line segments can you see in the figur
Ilang line segment ang makikita sa larawan?



Number of Line Segment: _____

Answers:

A. $\overline{CE}$, $\overline{CA}$, $\overline{C0}$, $\overline{CR}$ *B. 12*

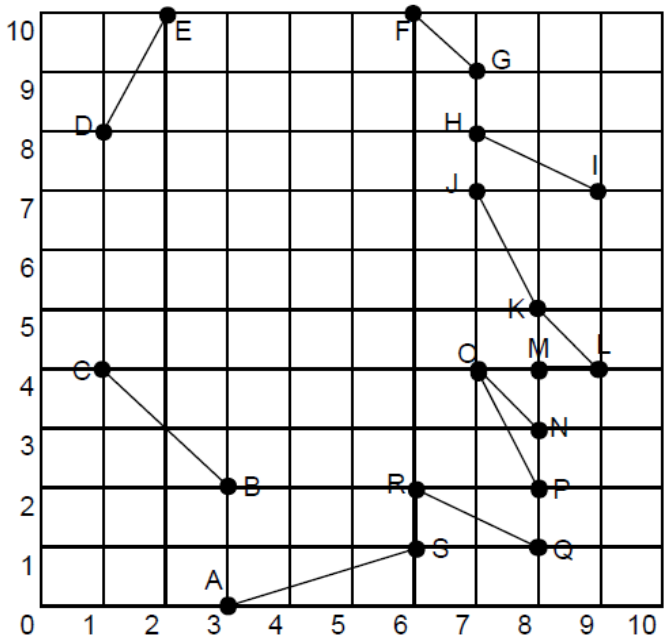
$\overline{ER}$, $\overline{EO}$, $\overline{EA}$, $\overline{EC}$

$\overline{AR}$, $\overline{AC}$, $\overline{AO}$, $\overline{AE}$

$\overline{RE}$, $\overline{RA}$, $\overline{RO}$, $\overline{RC}$

Component 4C

A. Connect all points from A to S then back to A. Be sure not to make curve lines. List down at least 10 combinations of congruent line segments.
Iugnay ang lahat ng mga points mula A hanggang S pagkatapos bumalik muli sa A. Siguraduhin na hindi gumagawa ng mga kurbadang linya. Maglista ng hindi bababa sa 10 kombinasyon ng mga congruent line segment.

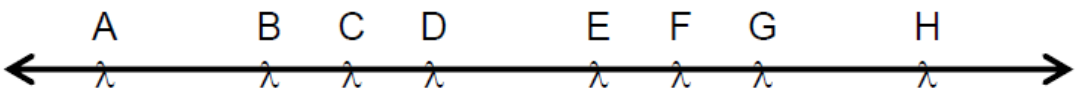


1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

B. Bring your ruler and pencil. Draw congruent line segments with the following measurements.
Kumuha ng ruler at lapis. Gumuhit ng mga congruent line segment na may sumusunod na sukat.

1. 10 cm
2. 15 cm
3. 20 cm
4. 25 cm
5. 30 cm

C. Look at the line. List down 10 pairs of congruent line segments
Tignan ang mahabang linya. Sumulat ng 10 congruent line segments.

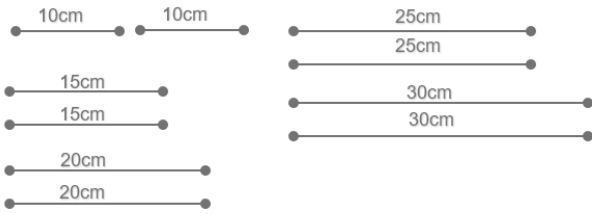


Answers:

Sagot:

$\overline{DE} \cong \overline{HI}$
$\overline{FG} \cong \overline{KL}$
$\overline{SQ} \cong \overline{RP}$
$\overline{RQ} \cong \overline{OP}$

$\overline{KL} \cong \overline{ON}$



$\overline{AB} \cong \overline{DE}$
$\overline{BC} \cong \overline{CD}$
$\overline{EF} \cong \overline{FG}$
.
.
.
$\overline{AD} \cong \overline{EH}$

Component 5: Lesson Conclusion

Time: 5 mins.

- As we conclude this lesson, it's important to reflect on the valuable skills we've developed. We have navigated through the complexities of visualizing, identifying and drawing congruent line segments.

- Initiate a Reflective Discussion by asking open-ended questions like, "*What was the most important concept you learned today?*" or "*How can you apply today's lesson in real-life situations?" Encourage students to think about how the lesson connects to practical scenarios, such as designing a houses, buildings, bridges and etc*.

- Encourage self-assessment by asking, "*What did you find challenging about this lesson, and how did you overcome it?" or "What skill do you feel you improved the most?"*

- Conclude the session by summarizing the key takeaways of the lesson, highlighting how each point contributes to a broader understanding of mathematics and its application. Let the learners enumerate their knowledge gained from the lesson.

For inquiries or feedback, please write or call:

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