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DepED
DEPARTMENT OF EDUCATION

Learning Activity Sheet for Mathematics

Quarter 1
Lesson
3

Learning Activity Sheet for Mathematics Grade 8
Quarter 1: Lesson 3 (Week 3)
SY 2025-2026

Development Team

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LEARNING ACTIVITY SHEET 1

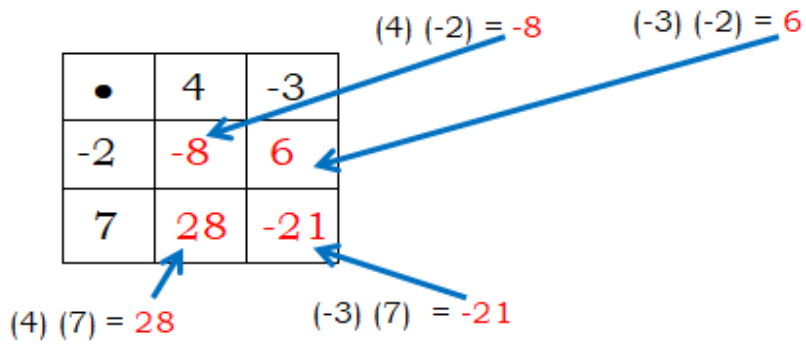
Learning Area:	Mathematics	**Quarter:**	1
Lesson No.:	3	**Date:**	
Lesson Title/ Topic:	Use expanded form in Multiplication of Monomials to derive the laws of exponents		
Name:		**Grade & Section:**	

I. **Activity No. 1:** Multiplication Squares (Review of the Lesson) (3 minutes)

II. **Objective(s):** At the end of the activity, you should be able to recall how to multiply integers.

III. **Materials Needed:** pen and activity sheet

IV. **Instructions:** Complete the entries by multiplying the integers. An example is given as your guide to fill in the missing boxes.



•	4	-3
-2	-8	6
7	28	-21

	7	4
8		
5		

	-6	-9
-3		
-2		

	-12	3
0		
-8		

	11	-5
-4		
9		

V. **Synthesis:**

1. What are the rules in multiplying integers?

_____

_____

_____

2. How did you find the activity? Can you share and describe your experience?

_____

_____

_____

LEARNING ACTIVITY SHEET

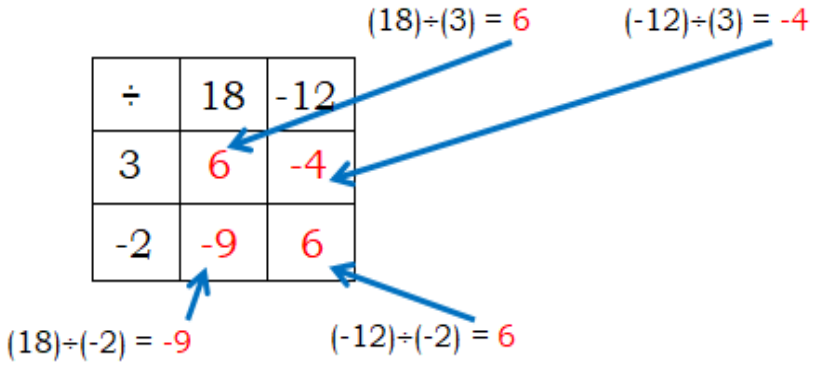
Learning Area:	Mathematics	**Quarter:**	1
Lesson No.:	3	**Date:**	
Lesson Title/ Topic:	Use expanded form in division of monomials to derive the laws of exponents		
Name:		**Grade & Section:**	

I. Activity No. 2: Division Squares (Review of the Lesson) (3 minutes)

II. Objective(s): At the end of the activity, you should be able to recall how to multiply integers.

III. Materials Needed: pen and activity sheet

IV. Instructions: Complete the entries by dividing the integers. The dividend is the integers written in the row while the integers in the column are the divisor. An example is given as your guide to fill in the missing boxes.



÷	18	-12
3	6	-4
-2	-9	6

÷	21	42
3		
7		

÷	-24	-36
-6		
-4		

÷	0	70
7		
-5		

÷	44	-32
-4		
2		

V. Synthesis:

1. What are the rules in dividing integers?

_____

_____

_____

2. How did you find the activity? Can you share and describe your experience?

_____

_____

_____

LEARNING ACTIVITY SHEET

Learning Area:	Mathematics	**Quarter:**	1
Lesson No.:	3	**Date:**	
Lesson Title/ Topic:	Use expanded form in Multiplication of Monomials to derive the laws of exponents.		
Name:		**Grade & Section:**	

I. Activity No. 3: The Monomial Fish (15 minutes)

II. Objective(s): At the end of the activity, you should be able to apply Product Rule in multiplying monomials.

III. Materials Needed: pen, crayons and activity sheet

IV. Instructions:

1. Find the product of the given monomials applying the Product Rule.
2. Encircle the correct answer from the Answer Box.
3. Use the corresponding number and the color from the correct answer to shade each part of the figure.

Rubrics:

Accuracy of answers	**10 points** All monomials are multiplied correctly.	**9 points** There are 1- 2 errors in the product of the monomials.	**8 points** There are 3- 4 errors in the product of the monomials.	**7 points** There are more than 5 errors in the product of the monomials.
Correctness of decoding	**10 points** All colors are decoded correctly.	**9 points** 1-2 errors in the decoded color.	**8 points** 3-4 errors in the decoded color.	**7 points** More than5 errors in the decoded color.
Neatness of work	**10 points** Activity is done neatly and orderly. Colors from the assigned numbers are all followed.	**9 points** With a little more effort, the work could have been outstanding;	**8 points** The output showed average craftsmanship; adequate, but not as good as it could have been, a bit careless.	**7 points** Activity needs a lot of revisions and the task is not finished.

	Find the product	ANSWER BOX		
1	$(3x^2y^2z)(4xyz)$	Red $7x^3y^3z^2$	Pink $12x^2y^2z$	Yellow $12x^3y^3z^2$
2	$(-7x^3y^5)(-9x^2y^2z)$	Brown $-63x^5y^7z$	Red $63x^5y^7z$	Green $72x^5y^7$
3	$(-6xy^3z^4)(5x^2y^4z^3)$	Green $-30x^2y^7z^7$	Pink $30x^3y^7z^7$	Orange $-30x^3y^7z^7$
4	$(-12x^3y^3z^4)(-x^2y^4z^3)$	Pink $12x^5y^7z^7$	Blue $-12x^5y^7z^7$	Violet $12x^6y^6z^7$
5	$(-xyz)(-xyz)$	Violet $x^2y^2z^2$	Green $-x^2y^2z^2$	Pink $-2xyz$
6	$(-8x^3y^3z^2)(-2x^2y^4z^3)$	Blue $16x^3y^7z^3$	Orange $-16x^5y^7z^5$	Green $16x^5y^7z^5$
7	$(-4x^3y^3)(9x^2z^3)$	Red $36x^5y^3z^3$	Blue $-36x^5y^3z^3$	Orange $-36x^3y^3z^3$
8	$(12x^2z^5)(3x^2y^3)$	Brown $36x^4y^3z^5$	Yellow $-36x^4y^3z^5$	Pink $15\ x^4y^3z^5$

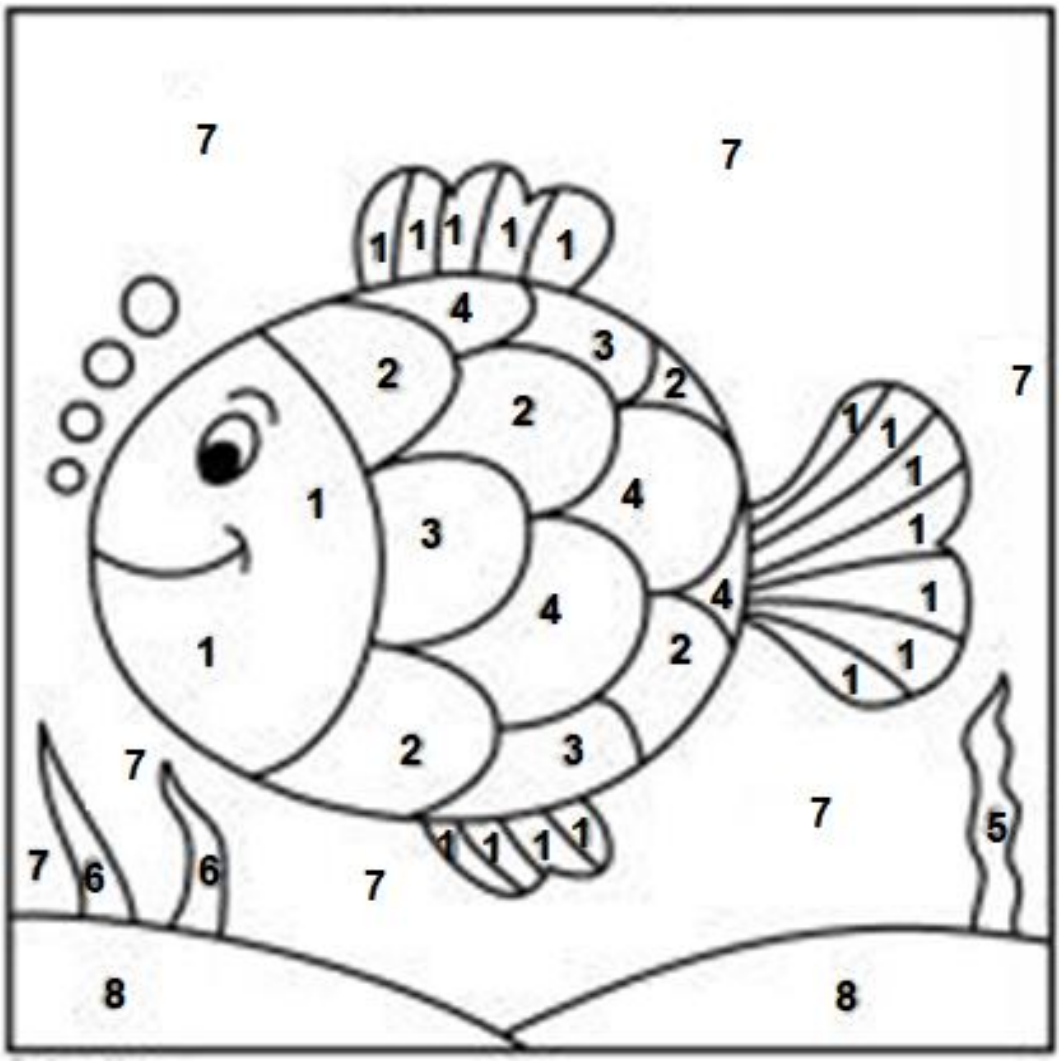


Image Source: https://www.pinterest.ph/pin/448741550375284491/

V. Synthesis:

1. How do you multiply monomials using the product law of exponent?

_____

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2. How did you find the activity? Can you share and describe your experience?

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LEARNING ACTIVITY SHEET

Learning Area:	Mathematics	**Quarter:**	1
Lesson No.:	3	**Date:**	
Lesson Title/ Topic:	Use expanded form in division of monomials to derive the laws of exponents.		
Name:		**Grade & Section:**	

I. Activity No. 4: The Root of Joy (15 minutes)

II. Objective(s): At the end of the activity, you should be able apply laws of exponent in dividing monomials.

III. Materials Needed: pen and activity sheet

IV. Instructions: Divide the given monomials. Write the letter that is paired with the question and the correct answer below to decode the "Root of Joy".

According to an Austrian American monk and author David Steindl-Rast, the root of joy is _____.

T $\frac{x^4y^6z^5}{x^6y^7z^4}$	C $\frac{10x^7y^2z^5}{-5x^6y^7z^7}$	A $\frac{x^6y^7z^3}{x^4y^6z^4}$	D $\frac{28x^4y^4z^8}{-7x^2y^8z^8}$
R $\frac{-12xy}{-6x}$	E $\frac{-30x^2y^5z^3}{6x^2y^5z^3}$	G $\frac{6xy}{3y}$	I $\frac{27x^7y^3}{-3x^4y^3}$
B $\frac{-14x^4y^8}{2x^6y^6}$	T $\frac{-16x^6y^6}{2x^6y^6}$	O $\frac{48x^5y^9}{-6x^4y^3}$	U $\frac{-36x^4y^5z^3}{-4x^4y^7z^6}$

2x	2y	$\frac{x^2y}{z}$	$\frac{z}{x^2y}$	$-9x^3$	-8	$\frac{9}{y^2z^3}$	$-\frac{4x^2}{y^4}$	-5

V. Synthesis:

1. How did you divide the monomials?

_____

_____

2. How did you find the activity? Can you share and describe your experience?

_____

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LEARNING ACTIVITY SHEET

Learning Area:	Mathematics	**Quarter:**	1
Lesson No.:	3	**Date:**	
Lesson Title/ Topic:	Multiplication and Division of Binomials and Multinomials by Monomial.		
Name:		**Grade & Section:**	

I. Activity No. 5

II. Objective(s): At the end of the activity, you should be able to multiply and divide binomials and multinomials by a monomial applying distributive property.

III. Materials Needed: pen and activity sheet

IV. Instructions: Perform the indicated operations.

A. Find the product of the following polynomials.

1. (6a)(5a + 2)

2. $(-9x^2y)(3xy - 2x)$

3. (4)(-6c – 2d)

4. $(-7c^2d^2)(-4cd + 6cd^3 - 2d)$

5. $(-xyz)(-6xy + 2x^2y^2z - 4xy^2)$

B. Find the quotient of the following polynomials.

1. $\frac{18x^5+27x^4}{3x^2}$

2. $\frac{-10a^6b^4+25a^3b^3}{-5a^2b^3}$

3. $\frac{16m^3n^3-32m^2n^5}{4m^2n^2}$

4. $\frac{50ab^3c^4+40ab^5c^7-30a^2b^4c^3}{10ab^2c^3}$

5. $\frac{-m^5n^4+m^4n^5-m^3n^3}{-m^3n^3}$

V. Synthesis:

1. How did you find the product of binomials and multinomials multiplied by a monomial?

_____

_____

_____

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2. How did you find the quotient of binomials and multinomials divided by a monomial?

_____

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3. How did you find the activity? Can you share and describe your experience?

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LEARNING ACTIVITY SHEET

Learning Area:	Mathematics	**Quarter:**	1
Lesson No.:	3	**Date:**	
Lesson Title/ Topic:	Multiplication of Binomials using distributive property with various techniques (FOIL and Vertical Form)		
Name:		**Grade & Section:**	

I. Activity No. 6: Binomial Bingo

II. Objective(s): At the end of the activity, you should be able to multiply and divide binomials using distributive property with various techniques (FOIL and Vertical Form).

III. Materials Needed: pen, activity sheet, marker, die

IV. Instructions:

1. Let the students create a 3x3 grid on a piece of paper.
2. Have them select and write a trinomial each box on their grid.

TRINOMIAL PRODUCT:

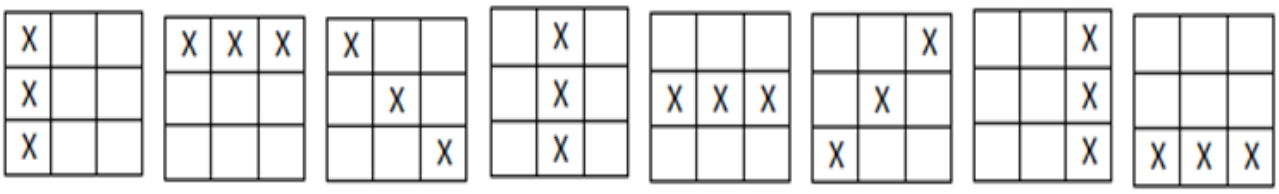
$x^2+6x-27$	$x^2-9x+18$	x^2-x-6	$x^2+5x-36$	$x^2-8x+16$
$x^2-7x+12$	$x^2+17x+72$	x^2-2x-8	$x^2+18x-27$	
$x^2+5x-24$	$x^2-4x-12$	$x^2-6x-56$	$x^2+18x+81$	
$x^2+3x-54$	$x^2-10x+24$	$x^2+4x-32$	$x^2-12x+36$	
$x^2+11x+18$	$x^2+2x-48$	x^2-6x+9	x^2+4x+4	

BINOMIALS TO BE MULTIPLIED:

1. $(x - 3)$
2. $(x + 9)$
3. $(x - 6)$
4. $(x + 2)$
5. $(x - 4)$
6. $(x + 8)$

3. Let the students roll a die twice. The number that comes out are the binomials to be multiplied.
4. Once the product is in their list, you must cross it out.
5. The first completes any of the given pattern wins the Binomial Bingo.

PATTERN FOR THE BINOMIAL BINGO:



V. Synthesis:

1. Which method in multiplying binomials is easier for you?

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_____

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2. Why? How did you find the activity? Can you share and describe your experience?

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LEARNING ACTIVITY SHEET

Learning Area:	Mathematics	**Quarter:**	1
Lesson No.:	3	**Date:**	
Lesson Title/ Topic:	Division of Multinomial by a Binomial		
Name:		**Grade & Section:**	

I. Activity No. 7

II. Objective(s): At the end of the activity, you should be able to multiply and divide binomials and multinomials by a monomial applying distributive property.

III. Materials Needed: pen and activity sheet

IV. Instructions: Find the quotient of the following polynomials.

1. $\frac{x^2+5x+6}{x+2}$

2. $\frac{x^2-2x+1}{x-1}$

3. $\frac{x^2+3x-4}{x+4}$

4. $\frac{x^2+11x+10}{x+1}$

5. $\frac{x^2+8x-20}{x-2}$

V. Synthesis:

1. How did you find the quotient of the given polynomials?

_____

_____

_____

2. How did you find the activity? Can you share and describe your experience?

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