Math Virtual Learning

Essential Math 4

Unit 10 Lesson 2 Review
Dividing polynomials using Area Model

April 13, 2020

Essential Math 4
Lesson: April 13, 2020

Learning Target:
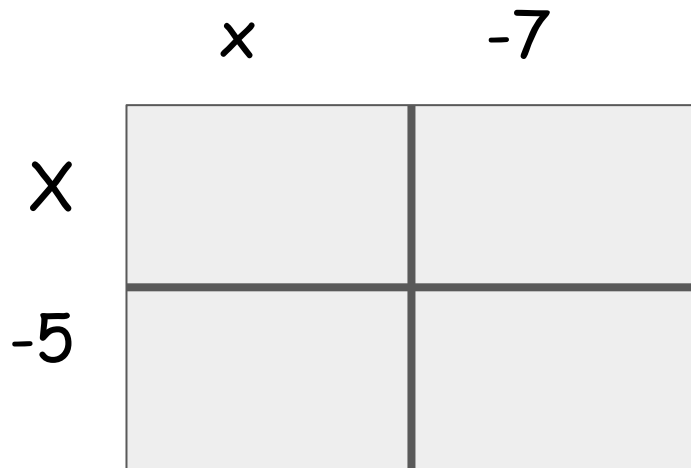## I can use the area model to divide numbers and algebraic expressions.
(This is a review of Unit 10, Lesson 2)

Bell Work
April 13, 2020

Complete the area model below:

Bell Work ANSWER KEY
April 13, 2020

Complete the area model below:

	x	-7
X	x^2	-7x
-5	-5x	35

$x^2-12x+35$

You will **explore the use of area models to factor algebraic expressions.**

Directions:

1. Click through the slides.
2. Watch all videos on slides.
3. Do what each slide asks on a separate sheet of paper.

Area models show how to organize the multiplication of *two* factors to find their product.

When we *divide*, we start with the product and one factor, and we use division to *find the other factor* (and sometimes a remainder).

When we *factor* with an area model, we start with only the product (inside the model), and we *find two factors*.

Practice Problems: Unit 10 Lesson 2 Review   page 10, A-B

Additional Practice

Complete these area model puzzles and write either a multiplication or division equation to describe each one.

Ⓐ

	x^2	$2x$
	$5x$	10

(___)(___) $= x^2 +$ ____ $+ 10$

Ⓑ

	___	-4
j		
6	$6j$	-24

Answer Key:

Once you have completed the problems, check your answers for page 13 here.

Additional Practice

Complete these area model puzzles and write either a multiplication or division equation to describe each one.

(A)

	x	2
x	x^2	$2x$
5	$5x$	10

$(x + 5)(x + 2) = x^2 + \underline{7x} + 10$

(B)

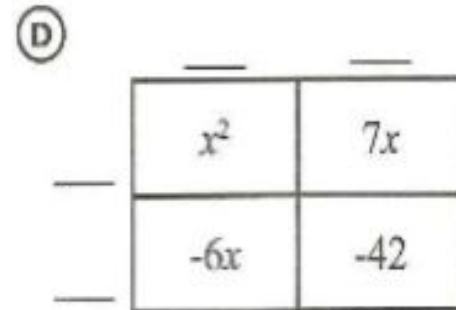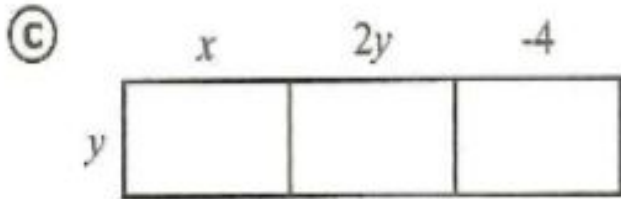|	j	-4
j	j^2	$-4j$
6	$6j$	-24

$$\frac{j^2 + 2j - 24}{j + 6} = j - 4$$

Practice Problems: Unit 10 Lesson 2 Review   page 10, C-D

Ⓒ

	x	$2y$	-4
y			

Ⓓ

	___	___
___	x^2	$7x$
___	$-6x$	-42

Answer Key:

Once you have completed the problems, check your answers for page 13 here.

Ⓒ

	x	$2y$	-4
y	xy	$2y^2$	$-4y$

$$\frac{xy + 2y^2 - 4y}{y} = x + 2y - 4$$

(Responses will vary. Examples shown.)

Ⓓ

	x	7
x	x^2	$7x$
-6	$-6x$	-42

$$(x + 7)(x - 6) = x^2 + x - 42$$

Practice Problems: Unit 10 Lesson 2 Review   page 10, E-F

(E)

	y	-11
x		
4		

(F)

	___	___	___
m	m^2	mn	$-5m$

Answer Key:

Once you have completed the problems, check your answers for page 13 here.

(E)

	y	-11
x	xy	$-11x$
4	$4y$	-44

$(x + 4)(y - 11) = xy - 11x + 4y - 44$

(F)

	m	n	-5
m	m^2	mn	$-5m$

$$\frac{m^2 + mn - 5m}{m} = m + n - 5$$

Practice Problems: Unit 10 Lesson 2 Review   page 10, G-H

Answer Key:

Once you have completed the problems, check your answers for page 13 here.

Ⓖ

	y	$\underline{10}$
y	y^2	$10y$
10	$10y$	100

$$\frac{y^2 + 20y + 100}{y + 10} = y + 10$$

Ⓗ

	x	$\underline{3}$
$\underline{x}$	x^2	$3x$
$\underline{8}$	$8x$	24

$$(x + 3)(x + 8) = x^2 + 11x + 24$$

Practice Problems:
Unit 10 Lesson 2
Review
page 10, E-J

I

a^2	
$9a$	81

J

x	
	xy

x

3

Answer Key:
Once you have completed the problems, check your answers for page 13 here.

Ⓘ

	a	9
a	a^2	$9a$
9	$9a$	81

$$(a + 9)^2 = a^2 + 18a + 81$$

Ⓙ

	x	y
x	x^2	xy
3	$3x$	$3y$

$$\frac{x^2 + xy + 3x + 3y}{x + 3} = x + y$$

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