Virtual Learning

Essential Math 4

Unit 10

Lesson 5: Zero Product Property

April 24, 2020

Essentials Math 4
Lesson 5: April 24, 2020

Learning Target:
I can use an area model to factor trinomials (a=1).

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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.

Bell Work
April 24, 2020

Solve:

a) $x - 7 = 16$

b) $3r = 15$

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Bell Work
Answer Key
April 24, 2020

$$x - 7 = 16$$
$$+7 \quad +7$$
$$x = 23$$

$$\frac{3r}{3} = \frac{15}{3}$$

$$r = 5$$

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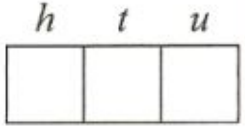
Practice Problems: Unit 10 Lesson 5 page 39

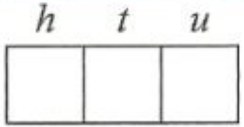
12 Who Am I?

- $t + u = 15$
- $h = t - u$
- $tu = 54$



13 Who Am I?

- $tu = 24$
- $t + u = 11$
- $h = t - u$



Answer Key:

Once you have completed the problems, check your answers for page 39 here.

12 Who Am I?

- $t + u = 15$
- $h = t - u$
- $tu = 54$

h	t	u
3	9	6

13 Who Am I?

- $tu = 24$
- $t + u = 11$
- $h = t - u$

h	t	u
5	8	3

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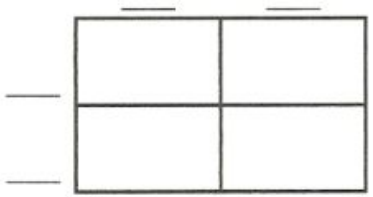
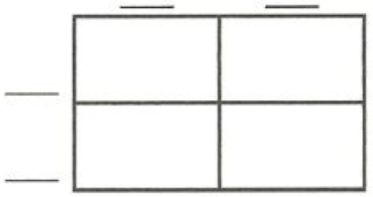
Practice Problems:
Unit 10
Lesson 5
page 39

Write in all four different combinations of the signs in the boxes (☐) using addition and subtraction. Then use the models to multiply and complete the equations.

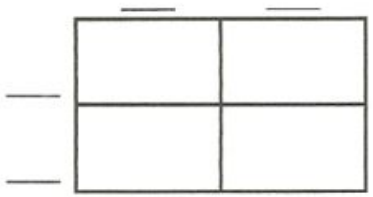
14 $(x \square 1)(x \square 4) =$ _____



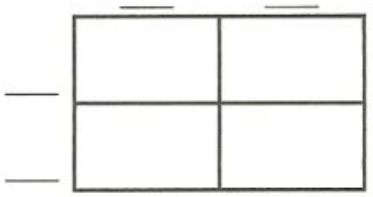
15 $(x \square 1)(x \square 4) =$ _____



16 $(x \square 1)(x \square 4) =$ _____



17 $(x \square 1)(x \square 4) =$ _____



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Answer Key:

Once you have completed the problems, check your answers for page 39 here.

Write in all four different combinations of the signs in the boxes (☐) using addition and subtraction. Then use the models to multiply and complete the equations.

14 $(x \boxplus 1)(x \boxplus 4) =$ $x^2 + 5x + 4$

	x	1
x	x^2	x
4	4x	4

(The order of responses will vary.)

15 $(x \boxplus 1)(x \boxminus 4) =$ $x^2 - 3x - 4$

	x	1
x	x^2	x
-4	-4x	-4

16 $(x \boxminus 1)(x \boxminus 4) =$ $x^2 - 5x + 4$

	x	-1
x	x^2	-x
-4	-4x	4

17 $(x \boxminus 1)(x \boxplus 4) =$ $x^2 + 3x - 4$

	x	-1
x	x^2	-x
4	4x	-4

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Practice Problems: Unit 10 Lesson 5 page 39

Complete each area model puzzle and write at least one equation that is represented by the model.

(18)

	___	___
p		
6	$6p$	18

(19)

	___	___
___	x^2	$-7x$
___	$-8x$	

Answer Key:

Once you have completed the problems, check your answers for page 39 here.

Complete each area model puzzle and write at least one equation that is represented by the model.

18

	p	3
p	p^2	$3p$
6	$6p$	18

$$\frac{p^2+9p+18}{p+6} = p+3$$

19

	x	-7
x	x^2	$-7x$
-8	$-8x$	56

$$(x-8)(x-7) = x^2-15x+56$$

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Practice Problems: Unit 10 Lesson 5 page 39

Factor the expression below.

(20) $x^2 - 10x + 16 =$ _____

Factor Pairs of 16	Sum

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Answer Key:

Once you have completed the problems, check your answers for page 39 here.

Factor the expression below.

20 $x^2 - 10x + 16 =$ $(x - 2)(x - 8)$

	x	-2
x	x^2	$-2x$
-8	$-8x$	16

Students don't have to use the table, don't have to fill it in completely, and may use a different logic to order their entries.

Factor Pairs of 16	Sum
1, 16	17
-1, -16	-17
2, 8	10
-2, -8	-10
4, 4	8
-4, -4	-8

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