



Virtual Learning

# HS Essential Math 4

## Unit 10

**Lesson 3: Review Factoring**

April 16, 2020



**Essential Math 4**  
**Lesson 3: April 16, 2020**

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



## Essential Math 4

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

### Directions:

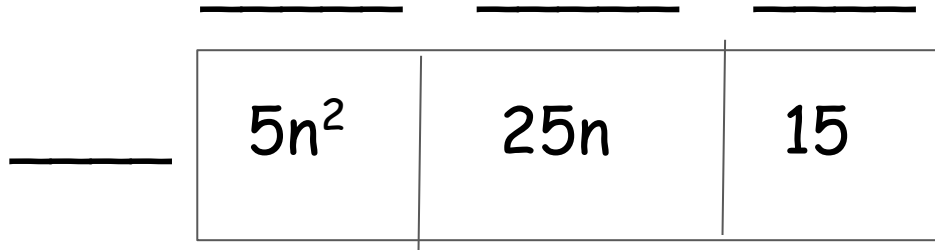
1. Click through the slides.
2. Watch all videos on slides.
3. Do what each slide asks on a separate sheet of paper.



# Essential Math 4

**Bell Work**  
**April 16, 2020**

Complete the area model below:



## Essential Math 4

### Bell Work Answer Key April 16, 2020

Complete the area model below:

	$n^2$	$5n$	$3$
$5$	$5n^2$	$25n$	$15$

Answer:  $5n^2 + 25n + 15 = 5(n^2 + 5n + 3)$



## Essential Math 4

Watch the [video](#) about how to factor using an area model.

Try the practice problem below:

$$x^2 - 12x + 36$$

# Essential Math 4

Practice  
 Problems:  
 Unit 10  
 Lesson 3  
 page 39

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

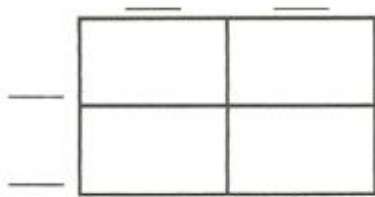
⑭  $(x \square 1)(x \square 4) = \underline{\hspace{2cm}}$



⑮  $(x \square 1)(x \square 4) = \underline{\hspace{2cm}}$



⑯  $(x \square 1)(x \square 4) = \underline{\hspace{2cm}}$



⑰  $(x \square 1)(x \square 4) = \underline{\hspace{2cm}}$



# Essential Math 4

## 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 ( $\square$ ) using addition and subtraction. Then use the models to multiply and complete the equations.

$$\textcircled{14} (x \oplus 1)(x \oplus 4) = \underline{x^2 + 5x + 4}$$

	<u>x</u>	<u>1</u>
<u>x</u>	$x^2$	$x$
<u>4</u>	$4x$	$4$

(The order of responses will vary.)

$$\textcircled{15} (x \oplus 1)(x \ominus 4) = \underline{x^2 - 3x - 4}$$

	<u>x</u>	<u>1</u>
<u>x</u>	$x^2$	$x$
<u>-4</u>	$-4x$	$-4$

$$\textcircled{16} (x \ominus 1)(x \oplus 4) = \underline{x^2 - 5x + 4}$$

	<u>x</u>	<u>-1</u>
<u>x</u>	$x^2$	$-x$
<u>-4</u>	$-4x$	$4$

$$\textcircled{17} (x \ominus 1)(x \ominus 4) = \underline{x^2 + 3x - 4}$$

	<u>x</u>	<u>-1</u>
<u>x</u>	$x^2$	$-x$
<u>4</u>	$4x$	$-4$

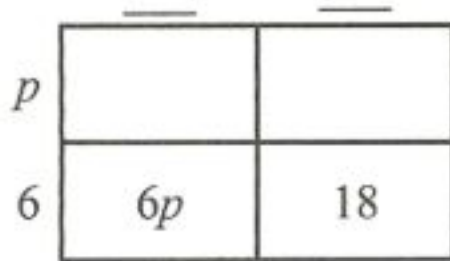


# Essential Math 4

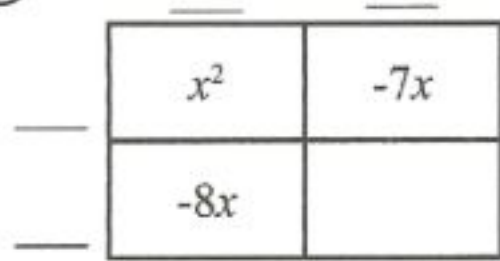
## Practice Problems: Unit 10 Lesson 3 page 39

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

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19



# Essential Math 4

## 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

	<u>p</u>	<u>3</u>
p	$p^2$	$3p$
6	$6p$	18

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

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	<u>x</u>	<u>-7</u>
<u>x</u>	$x^2$	$-7x$
<u>-8</u>	$-8x$	56

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



# Essential Math 4

## Answer Key:

Once you have completed the problems, check your answers for page 17 here.

Factor the expression below.

20  $x^2 - 10x + 16 = \underline{(x - 2)(x - 8)}$

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

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

$1, 16$	$17$
$-1, -16$	$-17$
$2, 8$	$10$
$-2, -8$	$-10$
$4, 4$	$8$
$-4, -4$	$-8$



# Essential Math 4

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