



# Essential Math 4

## Unit 10 Lesson 1: April 9

**Learning Target:**  
I can use the area model to divide.

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

**Directions:**

1. Click through the slides.
2. Watch all videos on slides.
3. Complete problems and tasks for each slide on a separate sheet of paper.

## Bell Work April 9, 2020

Draw an area model for each of the following:

1.  $300/10 =$

2.  $4r/4 =$

## Lesson:

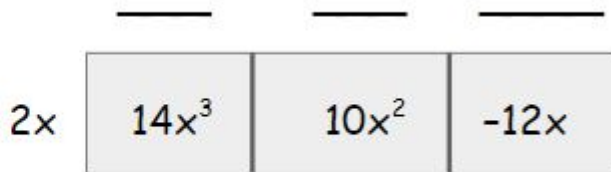
Watch the video below and follow along on your own paper.

[Dividing monomial by binomial using the Area Model](#)

# Practice:

**Practice:** Divide the expression below using an area model:

$$(14x^3 + 10x^2 - 12x) / 2x$$



Practice Problems: Unit 10 Lesson 2 page 7. Complete problems 1 - 8.

①

	$\overline{x}$	$\overline{4}$	$\overline{\quad}$
$\overline{\quad}$	$x^2$	$4x$	$xy$

②

	$\overline{\quad}$	$\overline{\quad}$
$p$		$7p$
$3$	$3p$	$21$

③

	$\overline{y}$	$\overline{\quad}$	$\overline{\quad}$
$y$		$5yz$	
$7$		$35z$	$42$

④

	$\overline{\quad}$	$\overline{\quad}$
$\overline{\quad}$	$x^2$	
$8$	$8x$	$-32$

## Practice Problems: Unit 10 Lesson 2 page 7. Complete problems 1 - 8.

Write an algebraic statement represented by each area model in two ways: as a multiplication equation and as a division equation.

⑤ Multiplication:  $\underline{\hspace{2cm}}$  (  $\hspace{2cm}$  )  $= x^2 + \underline{\hspace{2cm}} + xy$

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

⑥ Multiplication: (  $\hspace{2cm}$  ) (  $\hspace{2cm}$  )  $= p^2 + 10p + 21$

Division:  $\frac{\hspace{4cm}}{p + 7} =$

⑦ Multiplication:  $(y + 7)(\hspace{2cm})$   
 $= y^2 + 5yz + \underline{\hspace{2cm}}y + 35z + 42$

Division:  $\frac{\hspace{4cm}}{\hspace{2cm}} =$

⑧ Multiplication: (  $\hspace{2cm}$  ) (  $\hspace{2cm}$  )  $= x^2 + \underline{\hspace{2cm}} - 32$

Division:  $\frac{\hspace{4cm}}{\hspace{2cm}} =$

# Answer Key:

Once you have completed the problems, check your answers for page 7 here.

ANSWER KEY

## Lesson 2: Area Model Inside Out

### IMPORTANT STUFF

Complete each area model puzzle.

Write an algebraic statement represented by each area model in two ways: as a multiplication equation and as a division equation.

①

	<u>x</u>	<u>4</u>	<u>y</u>
<u>x</u>	$x^2$	$4x$	$xy$

⑤ Multiplication:  $\underline{x} (x + 4 + y) = x^2 + \underline{4x} + xy$

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

②

	<u>p</u>	<u>7</u>
<u>p</u>	$p^2$	$7p$
<u>3</u>	$3p$	$21$

These are puzzles!  
You'll have to look around to decide where to start and what to do next.

⑥ Multiplication:  $(\underline{p} + 7)(\underline{p} + 3) = p^2 + 10p + 21$

Division:  $\frac{p^2 + 10p + 21}{p + 7} = p + 3$

③

	<u>y</u>	<u>5z</u>	<u>6</u>
<u>y</u>	$y^2$	$5yz$	$6y$
<u>7</u>	$7y$	$35z$	$42$

⑦ Multiplication:  $(y + 7)(y + 5z + 6)$

$$= y^2 + 5yz + \underline{13}y + 35z + 42$$

Division:  $\frac{y^2 + 5yz + 13y + 35z + 42}{y + 5z + 6} = y + 7$

④

	<u>x</u>	<u>-4</u>
<u>x</u>	$x^2$	$-4x$
<u>8</u>	$8x$	$-32$

⑧ Multiplication:  $(x + 8)(x - 4) = x^2 + \underline{-4x} - 32$

Division:  $\frac{x^2 + -4x - 32}{x + 8} = x - 4$