



Essential Math 4 Unit 10 Lesson 1: April 6

Learning Target:
I can use the area model to multiply


Let's Get Started:
[Watch Video](#): Multiplying with the Area Model

Bell Work April 6, 2020

Draw an area model for each of the following:

1. $3(50 + 4)$

3

50	4
	

2. $12(20 + 5)$

Practice:

Go to this website:

[Multiplying with the area model](#)

1. Review and solve the problem on [Multiplying with the area model](#)
2. Like terms are terms that have the same variables raised to the same powers. To add like terms, add their coefficients.
3. Work through the problem and steps below

Draw an area model to fit the problem.

$$3x(2x + 5)$$

On this and the next slide, complete the practice problems 1 - 6.

Use an area model to multiply or divide. Complete each model and equation.

1. $4(7a - 8b + 9) =$ _____



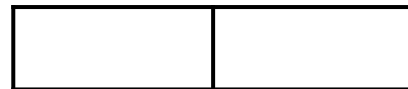
2. $\frac{10c - 35}{5} =$ _____



3. $5(3p^2 + 2) =$ _____



4. $\frac{42x - 49}{7} =$ _____



Finish practice problems 5 - 6.

5. $(2y + 5)(y - 3) =$ _____

6. $\frac{3a^2 - 6a}{a + 2} =$ _____

$3a^2$	- 6a
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Write at least two equations for each area model in problems 7 - 10.

Division is un-multiplication.
The same area model can represent different operations in equations:



Multiplying the factors:
 $3(a + 5) = 3a + 15$

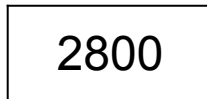
Dividing by a factor:
 $\frac{3a + 15}{3} = a + 5$

Dividing by the other factor:
 $\frac{3a + 15}{a + 5} = 3$

7.

7

400



8.

3h

12



9.

w

-8

3w



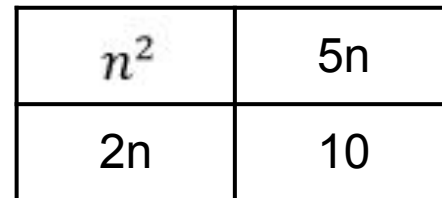
10.

n

5

n

2



Answer Key:

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

Key:

1. $28a - 32b + 36$

2. $2c - 7$

3. $15p^2 + 10$

4. $6x - 7$

5. $2y^2 - y - 15$

6. $3a$

7. $7(400) = 2800$ or $\frac{2800}{7} = 400$ or $\frac{2800}{400} = 7$

8. $12(3h) = 36h$ or $\frac{36h}{12} = 3h$ or $\frac{36h}{3h} = 12$

9. $3w(w - 8) = 3w^2 - 24w$ or $\frac{3w^2 - 24w}{w - 8} = 3w$ or $\frac{3w^2 - 24w}{3w} = w - 8$

10. $(n + 2)(n + 5) = n^2 + 11n + 10$ or $\frac{n^2 + 11n + 10}{n + 5} = n + 2$ or $\frac{n^2 + 11n + 10}{n + 2} = n + 5$