

Chapter 7 Review

Key Words

For #1 to #6, write the number of the polynomial in Column A beside the equivalent polynomial in Column B.

Column A

1. $\frac{8xy}{2x}$

2. $\frac{12x^2 - 6x}{3x}$

3. $(-2x)(-2x + 1)$

4. $\frac{12xy - 6x}{3}$

5. $\frac{8xy}{2}$

6. $\frac{12x^2 - 12x}{6}$

Column B

_____ $4xy - 2x$

_____ $4x^2 - 2x$

_____ $4y$

_____ $2x^2 - 2x$

_____ $4xy$

_____ $4x - 2$

7.1 Multiplying and Dividing Monomials, pages 367–377

7. Draw a model to complete the multiplication statement.

a) $(2x)(4x)$

- Draw 2 positive x -tiles on the top.
- Draw 4 positive x -tiles on the side.
- Complete the rectangle with x^2 -tiles.



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

b) $(-3x)(3x)$



$(-3x)(3x) = \underline{\hspace{2cm}}$

8. Find each product.

a) $(-8x)(11x)$

b) $(1.1x)(5x)$

9. Draw a model to complete the division statement.

a) $\frac{6x^2}{2x}$

b) $\frac{-8x^2}{4x}$

- Draw 2 positive x -tiles on the left side.
- Arrange 6 positive x^2 -tiles in 2 rows.
- Find the unknown side.



$$\frac{6x^2}{2x} = \underline{\hspace{2cm}}$$



$$\frac{-8x^2}{4x} = \underline{\hspace{2cm}}$$

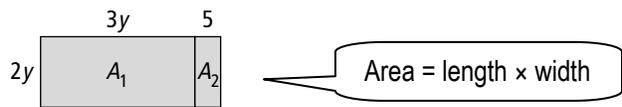
10. Find each quotient.

a) $\frac{2xy}{2x}$

b) $\frac{-4.2r^2}{-2r}$

7.2 Multiplying Polynomials by Monomials, pages 379–386

11. Write the polynomial multiplication statement for the area model.



$A_1 = (\text{_____})(\text{_____})$ $A_2 =$

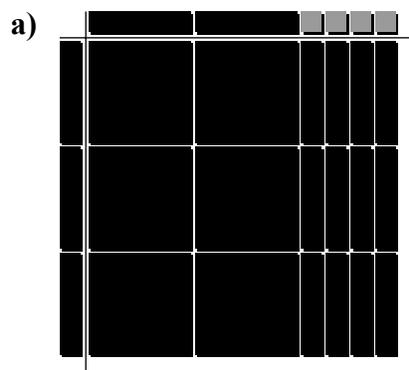
$= \text{_____}$

Total area = $A_1 + A_2$

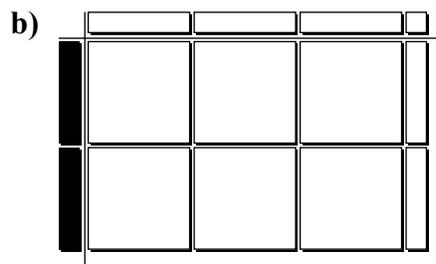
$= (\text{_____})(\text{_____} + \text{_____})$

$= \text{_____}$

12. Write the polynomial statement for the algebra tiles.



$(3x)(\text{_____}x + \text{_____}) = \text{_____}x^2 + \text{_____}$



13. Use the distributive property to simplify.

a) $(20x)(2x - 1)$

$= (20x)(\text{_____}) - (20x)(\text{_____})$

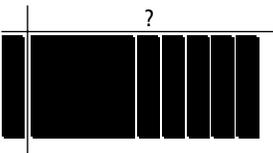
$= \text{_____} - \text{_____}$

b) $(-3x)(1.2x + 6)$

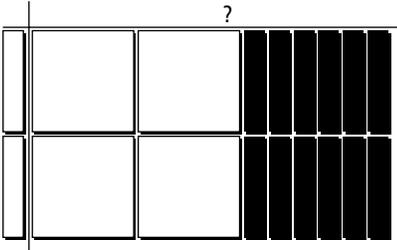
7.3 Dividing Polynomials by Monomials, pages 388–395

14. Write the division statement for the algebra tiles. Give the quotient.

The *quotient* is the answer when you divide.

a) 

$(\text{_____}x^2 + \text{_____}) \div x = \text{_____} + \text{_____}$

b) 

15. Divide.

a)
$$\frac{12n^2 - 2n}{2n}$$

$$= \frac{12n^2}{2n} - \frac{2n}{2n}$$

$$= \text{_____} - \text{_____}$$

b)
$$\frac{15x - 3x^2}{3x}$$

16. A triangle has an area represented by $3x^2 + 6x$. The base of the triangle is $3x$. Find the height.

Draw a diagram to help you.

Height = $2 \times \frac{\text{area}}{\text{base}}$

Sentence: _____