

Chapter 5 Test

Friday, January 11, 2019

Monday

5.5-5.6 quiz

January 8, 2019

Warm-Up

| 1. | Monomial, Binomial or Trinomial? | <i># in front of a variable</i> Coefficient[s] | <i>highest exponent</i> Degree | <i>just a number</i> Constant |
|---------------------|----------------------------------|---|-----------------------------------|----------------------------------|
| Polynomial | | | | |
| A. $4x - 3$ | Binomial | 4 | 1 | -3 |
| B. $-3x^2 + 4x + 7$ | Trinomial | -3, 4 | 2 | 7 |
| C. $3x$ | monomial | 3 | 1 | none |
| D. -4 | monomial | none | none zero | -4 |
| E. $2x^2 - x + 4$ | trinomial | 2, -1 | 2 | 4 |

2. Use algebra tiles to show how you would simplify the following...draw algebra tiles for each part of the question and the final answer!

Algebra Tiles

$$(2x^2 - 4x + 2) + (-x^2 + 2x - 3)$$



Grouping like Terms

$$(2x^2 - 4x + 2) + (-x^2 + 2x - 3)$$

$$2x^2 - 4x + 2 - 1x^2 + 2x - 3$$

$$(2x^2 - 1x^2) + (-4x + 2x) + (2 - 3)$$

$$1x^2 - 2x - 1$$

Simplify **[remember...question, group, simplify]**

$$4x^2 - 3x + 2 - 4x - 6x^2 - 5$$

$$4x^2 - 6x^2 - 3x - 4x + 2 - 5$$

$$-2x^2 - 7x - 3$$

~~Add~~ the following...show your steps!
 Subtract

- 1) Remove the brackets
- 2) Group
- 3) Simplify

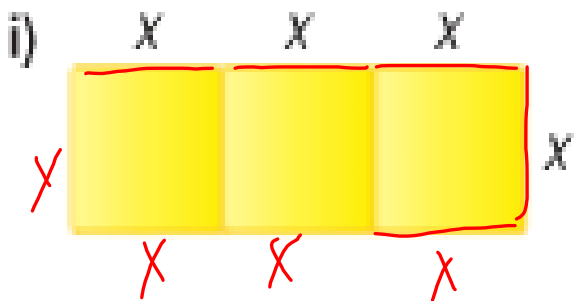
$$(-3x^2 - 7x + 2) - 2(-x^2 - 6x - 3)$$

$$-3x^2 - 7x + 2 + 2x^2 + 12x + 6$$

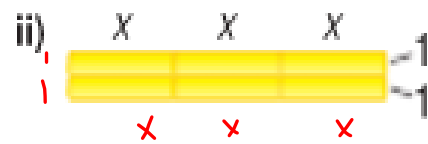
$$-3x^2 + 2x^2 - 7x + 12x + 2 + 6$$

$$\boxed{-1x^2 + 5x + 8}$$

Using Polynomials to represent perimeter

distance around outside

$$P = 8x$$



$$P = 6x + 4$$

* solve the perimeter if
 $x = 2$

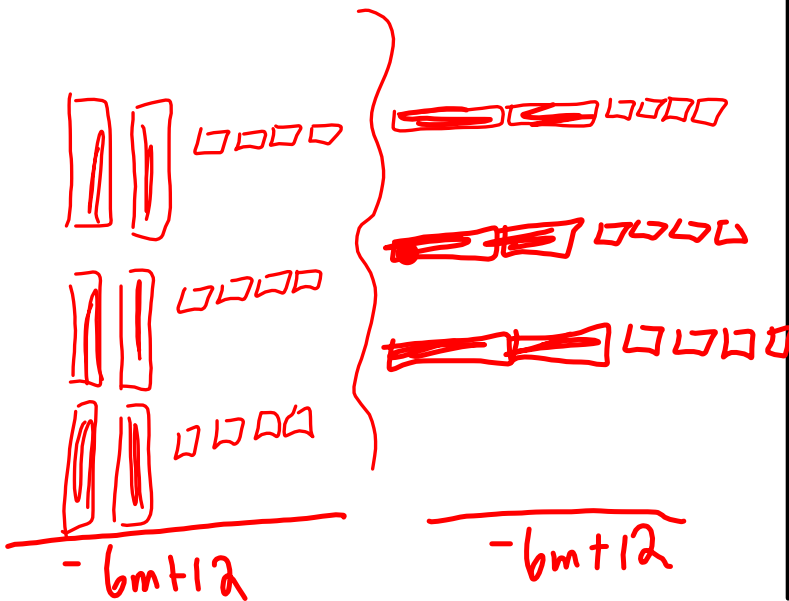
$$\begin{aligned}
 P &= 6x + 4 \\
 &6(2) + 4 \\
 &12 + 4 \\
 &16
 \end{aligned}$$

Section 5.5

Multiplying and dividing a polynomial by a constant

Use algebra tiles

Draw 3 rows of $-2m + 4$



Distributive Property

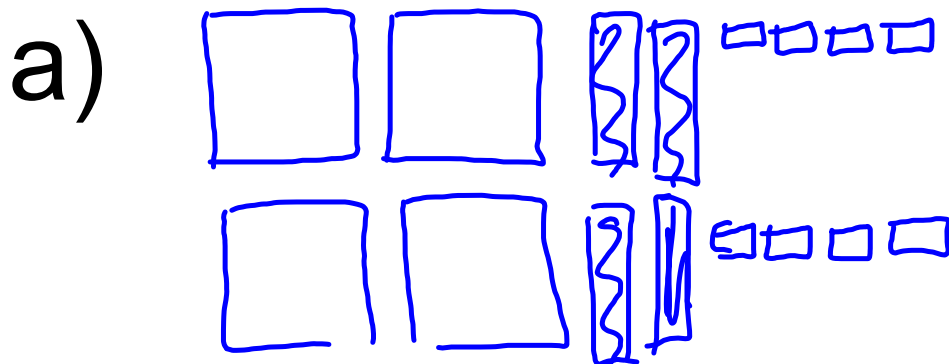
$$3(-2m + 4)$$

Multiplication sentence

$$-6m + 12$$

simplified

Write the multiplication sentence

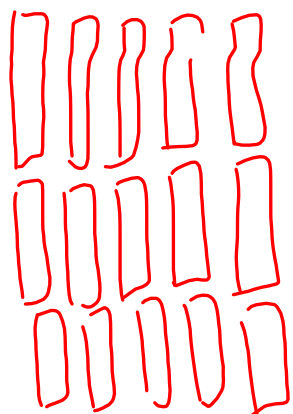


$$2(2x^2 - 2x + 4)$$

Multiply

$$\begin{array}{c} \text{\# of rows} \rightarrow 3(5r) \leftarrow \text{What is in each row} \\ \text{row} \end{array}$$

Algebra tiles



Distributive property

$$\begin{array}{l} \curvearrowright \\ 3(5r) \\ 15r \end{array}$$

Multiply: $2(-n^2 + 2n - 1)$

Algebra Tiles

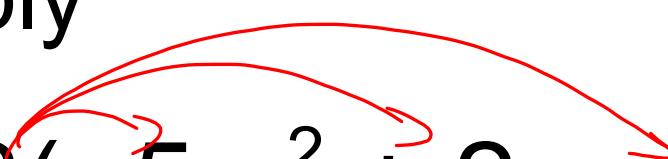


Distributive property

$$2(-n^2 + 2n - 1)$$

$$-2n^2 + 4n - 2$$

Multiply

$$3(-5m^2 + 2m - 8)$$


$$-15m^2 + 6m - 24$$

Division of Polynomial by a Constant

A. $\frac{4s^2 - 8}{4}$

$$\boxed{\frac{4s^2}{4}} \quad \boxed{-\frac{8}{4}}$$

$$1s^2 - 2$$

b. $\frac{-3m^2 + 15mn - 21n^2}{-3}$

$$\boxed{\frac{-3m^2}{-3}} \quad \boxed{+\frac{15mn}{-3}} \quad \boxed{-\frac{21n^2}{-3}}$$

$$1m^2 - 5mn + 7n^2$$

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

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

$$4x^2 - 1x + 2$$

Multiply or Divide

$$a) \frac{-4x^2 - 8x + 24}{-4}$$

$$\boxed{\frac{-4x^2}{-4}} \quad \boxed{\frac{-8x}{-4}} \quad \boxed{\frac{+24}{-4}}$$

$$x^2 + 2x - 6$$

$$b) -6(x^2 - 4x + 5)$$

$$-6x^2 + 24x - 30$$

$$c) -3(-2x^2 - 7x + 5 - 3x)$$

$$6x^2 + 21x - 15 + 9x$$

$$6x^2 + 21x + 9x - 15$$

$$\boxed{6x^2 + 30x - 15}$$

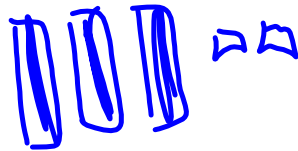
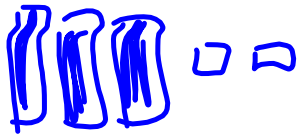
$$d) \frac{-15x^2 - 10x + 30}{-5}$$

$$\frac{-15x^2}{-5} \quad \boxed{\frac{-10x}{-5}} \quad \boxed{\frac{30}{-5}}$$

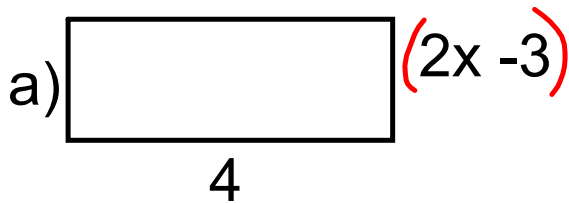
$$3x^2 + 2x - 6$$

Model the following:

rows → $2(-3r + 2)$ ← *in each row*



Write the multiplication sentence modelled by the rectangle. $A = bh$

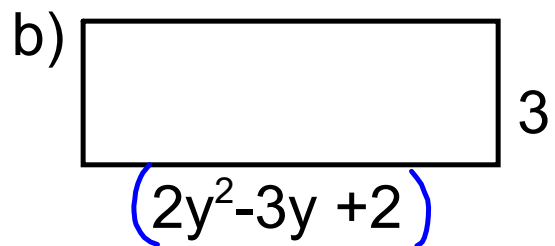


$$4(2x - 3)$$

multiplication
sentence

simplified
polynomial for
Area

solve is $y=3$



$$A = bh$$

$$3(2y^2 - 3y + 2)$$

$$6y^2 - 9y + 6$$

$$6(3)^2 - 9(3) + 6$$

$$6(9) - 27 + 6$$

$$54 - 27 + 6$$

$$\textcircled{33}$$

Homework

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5

7 [i, iii, v]

8 (i, iii)

9 sketch rectangle

11[a,c,e...sketch tiles]

13 [no tiles]

15 all

16 all

Pg 506-507
Answers