

Homework Questions???

12. a) Which polynomial must be added to $5x^2 + 3x - 2$ to get $7x^2 + 5x + 1$?
b) Which polynomial must be subtracted from $5x^2 + 3x - 2$ to get $7x^2 + 5x + 1$?

Justify your answers.

$$(5x^2 + 3x - 2) - (-2x^2 - 2x - 3) = 7x^2 + 5x + 1$$

$$5x^2 - \underline{-2x^2} = 7x^2$$

$$3x - \underline{-2x} = 5x$$

$$-2 - \underline{-3} = 1$$

$$-2 - \cancel{3} = -5$$

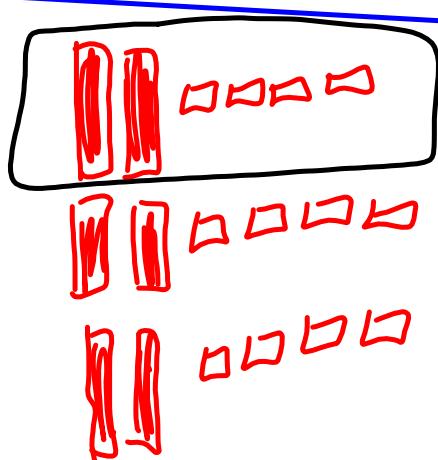
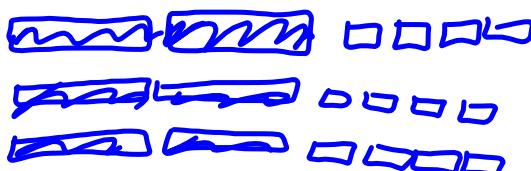
Section 5.5

January 7, 2016

Multiplying and dividing a polynomial by a constant

Use algebra tiles

Draw 3 rows of $-2m + 4$



Distributive Property

Handwritten mathematical expression: $3(-2m + 4)$. Above the expression, there are handwritten annotations: an arrow labeled "3" points to the first term, an arrow labeled "(-2m + 4)" points to the second term, and another arrow labeled "what is in each row" points to the expression. A question mark is placed above the number 3.

$$-6m + 12$$

Write the multiplication sentence

a)

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

$$\begin{array}{|c|} \hline 4 \\ \hline A = bh \\ \hline \end{array} \quad \begin{array}{|c|} \hline 3 \\ \hline A = bh \\ \hline \end{array}$$

$$A = bh$$

$$= 4 \times 3$$

$$= 12$$

b)

$$(2x+2)$$

$$A = bh$$

$$3$$

$$A = bh$$

$$A = (2x+2)(3)$$

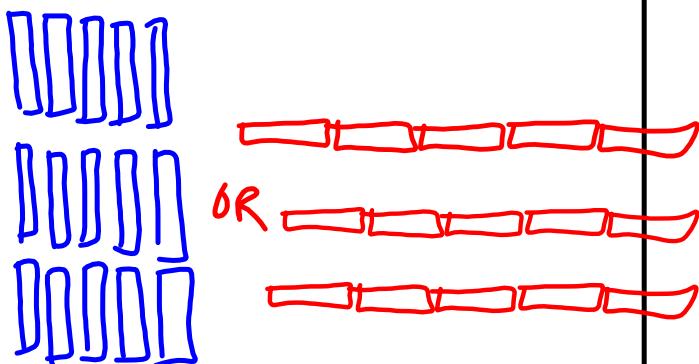
$$= 6x+6$$

$$A = 3(2x+2)$$

$$= 6x+6$$

Multiply $\xrightarrow{\# \text{ rows}}$ $3(5r)$ What is in each row

Algebra tiles



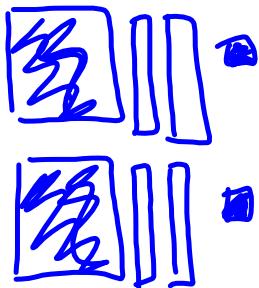
Distributive property

$$\begin{array}{c} 3 \\ \swarrow \searrow \\ (5r) \\ 15r \end{array}$$

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

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

$s^2 - 2$

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

$$\begin{aligned} & \frac{-3m^2}{-3} + \frac{15mn}{-3} - \frac{21n^2}{-3} \\ & m^2 - 5mn + 7n^2 \end{aligned}$$

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

$$\frac{12x^2}{3} \quad \frac{-3x}{3} \quad \frac{+6}{3} \quad (12x^2 - 3x + 6) \div 3$$

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

Multiply or Divide

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

$x^2 + 2x - 6$

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

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

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

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

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

$6x^2 + 30x - 15$

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

$3x^2 + 2x - 6$

Homework

Page 246 5^(a) [sketch tiles], 6 [sketch tiles]

9 sketch rectangles, 11, 13

15 [a,c,e], 16 [a, c, e, g] *No tiles*

Worksheet

