

Feb. 21st, 2014

Feb. 24th, 2015

Feb. 29, 2016

# GRADE 9 Math (TASK 1 & 2)

## Mini-Lesson # 3

5.5 & 5.6 Dividing Polynomials

Everyone needs a bag of tiles

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**Ex. 1**

**Dividing Polynomials: Using Algebra tiles**

To divide a polynomial by a monomial, we reverse the process of multiplying these polynomials.

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To determine the quotient of  $\frac{8x^2}{4x}$ , arrange eight  $x^2$ -tiles in a rectangle with one dimension  $4x$ .

$4x$

$2x \times 4x = 8x^2$

$\frac{8x^2}{4x} = 2x$

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**Ex. 1****Dividing Polynomials:  
Symbolically**

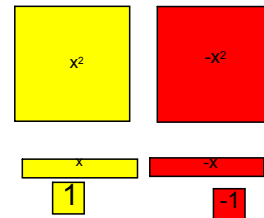
To divide a polynomial by a monomial, we reverse the process of multiplying these polynomials.

Symbolically:

$$\frac{8x^2}{4x} = 2x^{2-1}$$

$$= 2x^1$$

$$= \textcircled{2x}$$



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**Ex. 2****Dividing a Polynomial by a  
Constant**

Determine the quotient:

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

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

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Ex. 3

## Dividing a Polynomial by a Monomial

Determine the quotient:

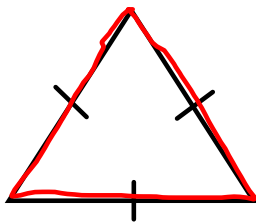
$$\frac{30k^2 - 18k}{-6k} = \frac{30k^2}{-6k} - \frac{18k}{-6k}$$

$$= -5k + 3$$

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Ex. 4

An equilateral triangle has a perimeter of  $24x^2 - 3x$ , what is the length of one side?



$$\frac{24x^2 - 3x}{3}$$

$$= \frac{24x^2}{3} - \frac{3x}{3}$$

$$= 8x^2 - x$$

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