



THE ERINDALE ACADEMY

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Lesson 2.1: Polynomials addition, subtraction, and multiplication

Homework pg88 – 90. #1ab, 3, 7, 9, 13, 17

pg95 – 97. #7, 11ac, 13

Lesson 2.2: Factoring and multiplication of rationals

Part 1: Factoring

Example 1:

Factor.

a) $x^2 - x - 30$

b) $18x^2 - 50$

c) $10x^2 - x - 3$

d) $9x^2 + 30x + 25$

e) $2x^2 + x + 3$

Example 2:

Factor $f(n) = n^3 + 3n^2 + 2n + 6$ by grouping.

Factor $f(x) = x^3 + x^2 + x + 1$.

Factor $g(x) = x^2 - 6x + 9 - 4y^2$.

Homework: pg102 – 104. #1, 2, 3, 12



Part 2: Multiplication of rationals and restriction

A rational function is the ratio of two polynomial functions:

$$f(x) = \frac{P(x)}{Q(x)}, Q(x) \neq 0$$

$$\text{e.g. } f(x) = \frac{x^2 - 2x + 3}{4x - 1} \quad \text{or} \quad g(x) = \frac{x^3 - x^2 + 10}{x^2 - 1}$$

Example 3:

Simplify the function and state the domain

$$f(v) = \frac{v - 5}{v^2 - 25}$$

$$f(x) = \frac{2x^4 - 28x^3 + 98x^2}{x^4 - 4x^3 - 21x^2}$$

Example 4: Simplify and state restriction.

$$\frac{14y^2}{3x^2} \times \frac{2x^4y^3}{7x^2y^2}$$

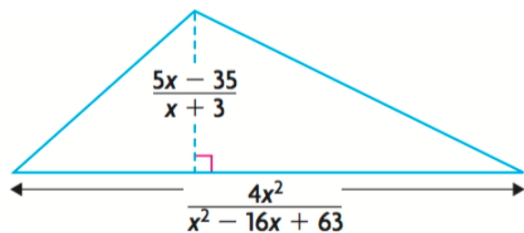
$$\frac{6x + 3}{3x} \times \frac{x^2}{2x + 1}$$

$$\frac{2x + 10}{x^2 - 4x + 4} \div \frac{x^2 - 25}{x - 2}$$



Example 5:

Determine the area of the triangle in simplified form state the restriction.



Example 6:

Simplify. State restrictions on the variables.

$$\frac{m^2 - mn}{6m^2 + 11mn + 3n^2} \div \frac{m^2 - n^2}{2m^2 - mn - 6n^2}$$
$$\frac{4m^2 - 7mn - 2n^2}{3m^2 + 7mn + 2n^2}$$

Homework:

Textbook pg. 113 #4, 5, 7, 8, 9 & pg. 122-123 #5, 6, 7, 8, 10, 12