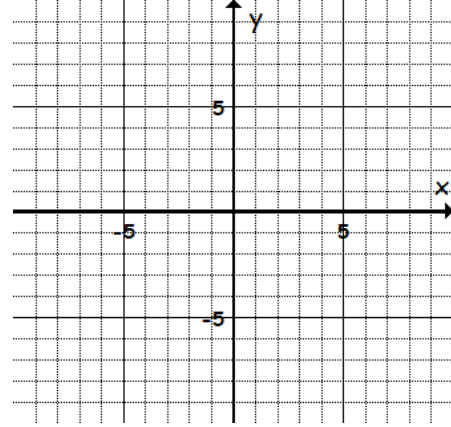


Group Members _____

Unit 5 -- I can simplify rational expressions, multiply rational expressions, add and subtract rational expressions, and graph rational expressions.

$$\frac{x^2 + 2x - 15}{4x^2 + 16x} \cdot \frac{2x - 12}{x^2 - 9x + 18}$$

$$y = \frac{-2}{x+2} - 3$$



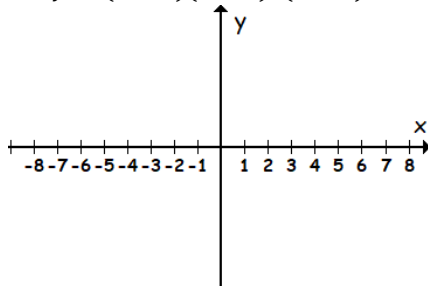
$$\frac{2x^2 + 8x - 12}{x^2 - 9} + \frac{4x^2 - 8x - 42}{x^2 - 9}$$

$$\frac{4}{x^2 + 5x + 6} + \frac{2x}{x + 2}$$

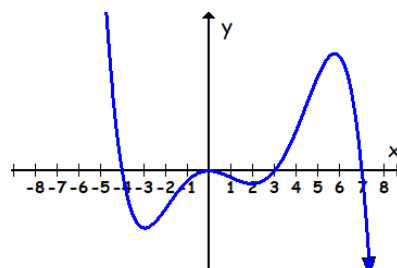
Unit 6 I can graph polynomials, determine the equations of polynomials, find exact equations of polynomials, factor 3+ degree polynomials given a root, and use the Remainder Theorem to determine if a value is a root.

Sketch the polynomial graph.

$$y = (x + 4)(x - 2)^3(x - 6)^2$$



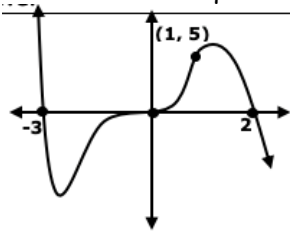
Write the basic equation



Fully Factor:

$$y = 4x^3 + 24x^2 - 31x - 21 \quad \text{Factor: } x + 7$$

Find the exact equation



Is $(-1, 0)$ a root of $f(x) = 3x^5 - 4x^4 - 2x^3 + 5x^2 + x - 1$

Unit 7 --I can perform arithmetic operations with i , write equations with complex roots in factored and standard form, and find the roots and factored form of equations with complex roots.

Simplify

$$(10 + 2i)(10 - 2i)$$

$$-4\sqrt{-32}$$

$$\frac{1+2i}{4+i}$$

Write the equation of a polynomial with roots $8 \pm 12i$

Factored form:

Standard form:

Write the fully factored form of $y = x^3 + 5x^2 + 9x + 45$ with a root at $(-5, 0)$

$$y = 2x^2 - 16x + 40$$