

Dividing Polynomials by Monomials:

When dividing polynomials by monomials, we *divide each term* by the divisor.

Ex: 1) $(3a^2 - 9) \div 3$

$$= \frac{\cancel{3}a^2}{\cancel{3}} - \frac{9}{3}$$

$$= a^2 - 3$$

Ex: 2) $(12x^3 - 16x^2 + 4) \div (-4x)$

$$= \frac{12x^3}{-4x} - \frac{16x^2}{-4x} + \frac{4}{-4x}$$

$$= -3x^2 + 4x - \frac{1}{x}$$