

FACTORING COMPLETELY



ALWAYS Think about our first 3 steps!!!

1. Write the quadratic in STANDARD FORM
2. Make the first term positive (factor out a negative)
3. Factor out a GCF (if possible)

$$\frac{3x^2}{3} + \frac{18x}{3} + \frac{24}{3}$$
$$3(x^2 + 6x + 8)$$
$$3(x+2)(x+4)$$

$$\frac{4x^2}{4} - \frac{36x}{4} + \frac{80}{4}$$
$$4(x^2 - 9x + 20)$$
$$4(x-5)(x-4)$$

$$\frac{4x^2}{2} + \frac{14x}{2} + \frac{10}{2}$$
$$2(2x^2 + 7x + 5)$$
$$2(2x+5)(x+1)$$

$$\frac{15x^2}{3} + \frac{42x}{3} - \frac{9}{3}$$
$$3(5x^2 + 14x - 3)$$
$$3(5x-1)(x+3)$$

$$\frac{20x^3}{4x} - \frac{64x^2}{4x} + \frac{44x}{4x}$$
$$4x(5x^2 - 16x + 11)$$
$$4x(5x-11)(x-1)$$

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

$$\frac{-x^2}{-1} + \frac{3x}{-1} + \frac{40}{-1}$$
$$-1(x^2 - 3x - 40)$$
$$-1(x+5)(x-8)$$