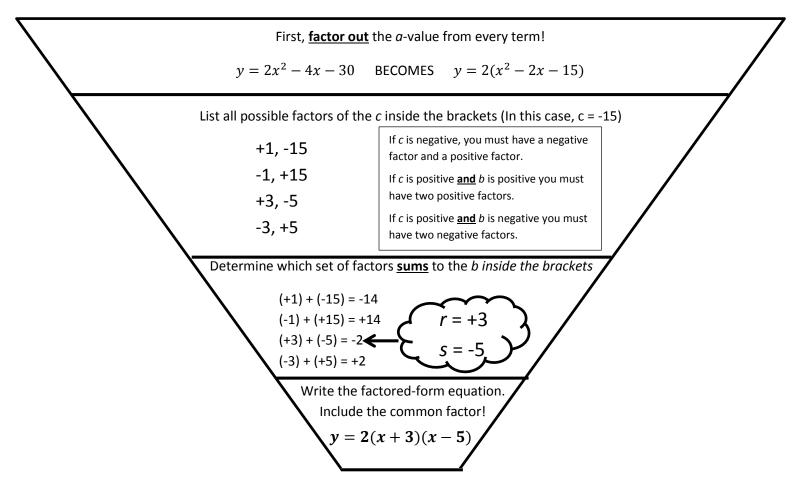
Today, we will learn how to factor quadratics in standard form when the *a-value is not 1*.

## Factoring Quadratic Equations in the Form $y = ax^2 + bx + c$

*Factor*:  $y = 2x^2 - 4x - 30$ 



Therefore, the standard form equation  $y = 2x^2 - 4x - 30$  is equivalent to the factored form equation y = 2(x - 5)(x + 3). Both equations will produce the same parabolic graph!

Factor out a Use a calculator! from each Factor:  $y = 2x^{2^{\aleph}} + 10x + 12$ Factor:  $y = 3x^2 + 3x - 90$  $1=2(x^{2}+5x+6)$  $y=3(x^2+x-30)$ Y = 3(x+6)(x-5)Y = 2(x+2)(x+3)Factor:  $y = 3x^2 - 12x - 96$ Factor:  $y = 4x^2 - 4x - 24$ 1=3(x2-4x-3  $\chi^2 - \chi$  $(\varphi)$ V = 4V=3(x-4)( X+L Y(x-3)(x+2) $\forall =$  $\overline{Factor: y = 4x^2} - 20x}{4}$  $Factor: y = 2x^2 - 18$ V =V=7(x+3)(x-3) V=41 (X-)