INFORMATION FROM STANDARD & FACTORED FORMS

How can STANDARD FORM and FACTORED FORM help us to graph a Quadratic Equation??

FORM	EQUATION	TELLS US…	WE CAN…
STANDARD	**$y = ax^2 + bx + c$**	**y – intercept "c" (0 , c)**	**Factor the equation!!**
FACTORED	**$y = a(x – r)(x – s)$**	**x – intercept(s) *ZEROS* (r, 0) and (s, 0)**	**Find the axis of symmetry!! A of S: $\frac{(r) + (s)}{2}$**

FIND THE Y-INTERCEPT ($y = ax^2 + bx + c$)

$y = 7x^2 + 2x – 5$ **let x = 0**

What's an easier way to find the y-intercept???

Find the y-intercept for the following equations in Standard Form:

a) $y = 11x^2 – 6x – 15$ b) $y = x^2 + 13x + 4$ c) $y = -6x^2 = 10x - 8$

QUICK REFRESHER: FACTORING TRINOMIALS!!

a) $x^2 + 5x + 6$ b) $x^2 - 5x – 24$ c) $5x^2 + 25x + 20$

FIND THE X-INTERCEPTS…THE ZEROS $y = a(x - r)(x - s)$

STEP 1: Change the equation from Standard Form to Factored Form, by factoring
STEP 2: Set y = 0
STEP 3: Solve for x

Find the zeros of the following equations:

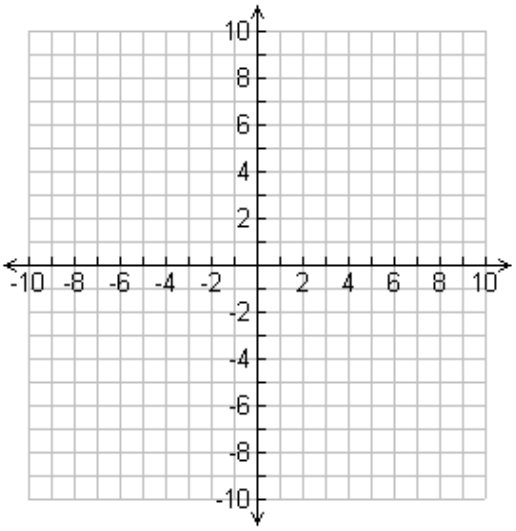
a) $y = x^2 - 8x - 33$

b) $y = 2x^2 + 6x - 80$

FIND THE AXIS OF SYMMETRY…USING THE ZEROS

The Axis of Symmetry is in the CENTRE of the zeros!

a) zeros: (-3 and 7)



b) zeros: (5 and -8)

A of S = $\frac{r + s}{2}$