

Using Vertex Form to Solve for X-intercepts

Ex. What are the x-intercepts for the graph $y = 5x^2 + 20x - 25$?

$$0 = 5x^2 + 20x - 25$$
$$0 = 5(x^2 + 4x + 4) - 25 - 20$$

	x	$+2$
x	x^2	$+2x$
$+2$	$+2x$	$+4$

$$0 = 5(x+2)^2 - 45$$

$$45 = 5(x+2)^2$$

$$9 = (x+2)^2$$

$$\pm 3 = x+2$$