

Name _____

Date _____

Advanced Algebra

Unit 4: Quadratics Classwork Assignment #13

I can factor with a leading coefficient >1

General Form	Factored Form	Roots	Vertex
$3x^2+14x+8$	$(3x+2)(x+4)$	$\boxed{-\frac{2}{3} \text{ and } -4}$ $3x+2=0$ $x+4=0$	$(-2.33, -8.33)$ $y = 3(x+2.33)^2 - 8.33$
$2x^2+5x-12$	$(2x-3)(x+4)$	$\boxed{\frac{3}{2} \text{ and } -4}$ $2x-3=0$ $x+4=0$	$(-1.25, -15.125)$ $y = 2(x+1.25)^2 - 15.125$
$7x^2-19x-6$	$(7x+2)(x-3)$	$\boxed{-\frac{2}{7} \text{ and } 3}$ $7x+2=0$ $x-3=0$	$(1.36, -18.9)$ $y = 7(x-1.36)^2 - 18.9$
$5x^2+22x+8$	$(5x+2)(x+4)$	$\boxed{-\frac{2}{5} \text{ and } -4}$ $5x+2=0$ $x+4=0$	$(-2.2, -16.2)$ $y = 5(x+2.2)^2 - 16.2$

General Form	Factored Form	Roots	Vertex
$13x^2+27x+2$	$(13x-1)(x+2)$	$\boxed{\frac{1}{13} \text{ And } -2}$ $13x-1=0$ $x+2=0$	$(-0.96, -11.94)$ $y = 13(x+0.96)^2 - 11.94$
$2x^2+1x-21$	$(2x+7)(x-3)$	$\boxed{-\frac{7}{2} \text{ And } 3}$ $2x+7=0$ $x-3=0$	$(-2.25, -21.125)$ $y = 2(x+2.25)^2 - 21.125$
$3x^2+22x-16$	$(3x+2)(x+8)$	$\boxed{-\frac{2}{3} \text{ And } -8}$ $3x+2=0$ $x+8=0$	$(-4.33, -55.01)$ $y = 3(x+4.33)^2 - 55.01$
$2x^2+4x-16$	$(2x+8)(x-2)$	$\boxed{-4 \text{ And } 2}$ $2x+8=0$ $x-2=0$	$(-1, -18)$ $y = 2(x+1)^2 - 18$ $-\frac{4+2}{2} = -\frac{2}{2}$
$5x^2+43x+24$	$(5x+3)(x+8)$	$\boxed{-\frac{3}{5} \text{ And } -8}$ $5x+3=0$ $x+8=0$	$(-4.3, -68.45)$ $y = 5(x+4.3)^2 - 68.45$
$2x^2+7x-4$	$(2x-1)(x+4)$	$\boxed{\frac{1}{2} \text{ And } -4}$ $2x-1=0$ $x+4=0$	$(-1.75, -10.125)$ $y = 2(x+1.75)^2 - 10.125$