

B.2.3 #76, 79-81, 83, 85, 87, 88

↳ 76, 79-81 do in class

Together 2017

B-76 Warm Up $y = 2x^2 + 8x + 6$

B-79(a) i) $y = 3(x-2)^2 - 5$

$$y = 3(x^2 - 4x + 4) - 5$$

$$y = 3x^2 - 12x + 12 - 5$$

$$\boxed{y = 3x^2 - 12x + 7}$$

ii) $f(x) = -2(x+4)^2 + 3$

$$f(x) = -2(x^2 + 8x + 16) + 3$$

$$f(x) = -2x^2 - 16x - 32 + 3$$

$$\boxed{f(x) = -2x^2 - 16x - 29}$$

b.) Vertex (2, -5)

Vertex (-4, 3)

c.) $y = \frac{1}{2}(x+3)^2 + 2$
Vertex (-3, 2)

B-80 skip a, c, e

b.) $y = (x+1)^2 - 16$

$$0 = (x+1)^2 - 16$$

$$\pm \sqrt{16} = \sqrt{(x+1)^2}$$

$$\pm 4 = (x+1)$$

d.) $y = a(x-h)^2 + k$

Graphing form is an appropriate name because...

$$x+1=4 \quad | \quad x+1=-4$$

$$\begin{array}{r|l} -1 & -1 \\ \hline \boxed{x=3} & \boxed{x=-5} \end{array}$$

Vertex: (-1, 16)

B-81 $y = (x+2)^2 - 3$

$$\boxed{\text{Vertex: } (-2, -3)}$$

$$0 = (x+2)^2 - 3$$

$$\pm \sqrt{3} = \sqrt{(x+2)^2}$$

$$\begin{array}{l} x = -2 + \sqrt{3} \\ \boxed{x \approx -0.27} \end{array} \quad \begin{array}{l} x = -2 - \sqrt{3} \\ \boxed{x \approx -3.73} \end{array}$$

approximate answers

$$\pm \sqrt{3} = x+2$$

$$\begin{array}{r|l} -2 & -2 \\ \hline \boxed{x = -2 \pm \sqrt{3}} & \end{array}$$

Exact Answer