

4-7 Worksheet B | Vertex Form

Write the quadratic functions in the form $y = ax^2 + bx + c$. Show your work.

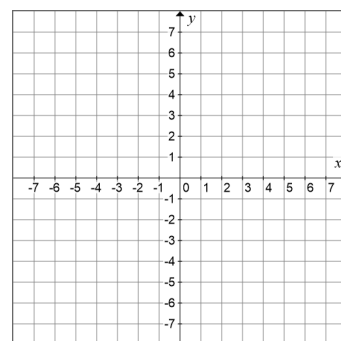
1. $y = 2(x + 5)^2 + 6$

2. $y = -(x - 3)^2 + 7$

Write the function in vertex form, $y = a(x - h)^2 + k$. Identify its vertex, as an ordered pair. Use transformations to graph the function. Show your work.

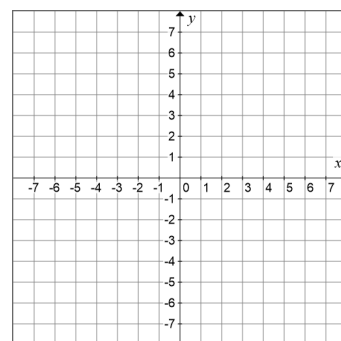
3. $y = 2x^2 + 20x + 47$

Vertex:



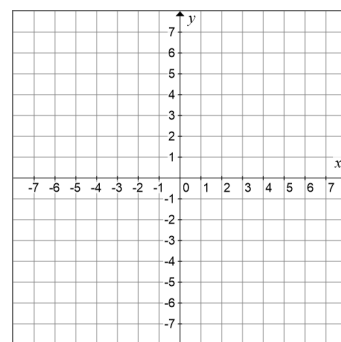
4. $y = x^2 - 6x + 11$

Vertex:



5. $y = -3x^2 + 24x - 43$

Vertex:



6a. $y = 4(x - 3)^2 - 7$ 6b. $(3, -7)$ 7a. $y = -(x + 6)^2 + 10$ 7b. $(-6, 10)$

a. Write the quadratic function in vertex form, $y = a(x - h)^2 + k$. b. Give the coordinates of its vertex. Show your work.

6a. _____

7a. _____

6b. _____

7b. _____

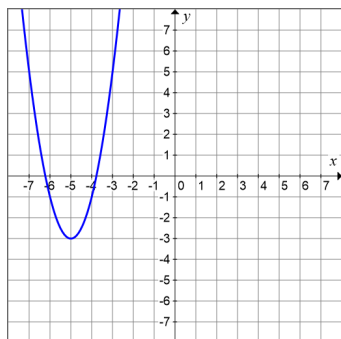
6. $y = 4x^2 - 24x + 29$

7. $y = -x^2 - 12x - 26$

1. $y = 2x^2 + 20x + 56$ 2. $y = -x^2 + 6x - 2$

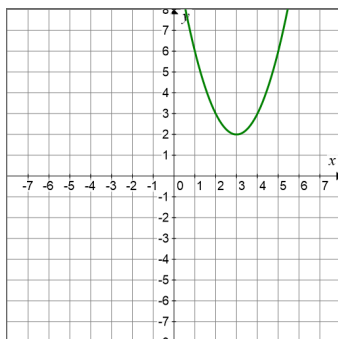
3. $y = 2(x + 5)^2 - 3$

Vertex: $(-5, -3)$



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

Vertex: $(3, 2)$



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

Vertex: $(4, 5)$

