

2.1 Quadratic Parent Function CYU DAY TWO

Use when you get it right all by yourself
S Use when you did it all by yourself, but made a silly mistake
H Use when you could do it alone with a little help from teacher or peer
G Use when you completed the problem in a group
X Use when a question was attempted but wrong (get help)
N Use when a question was not even attempted

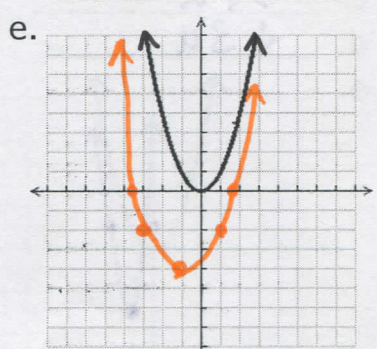
CONCEPTS	BASIC	INTERMEDIATE	ADVANCED
Vertex	1 - 12		
Horizontal/Vertical Stretch/Compression		1 - 12	
Translation left, right, up, down	1 - 12	1 - 12	
Graphing Quadratics	1 - 12		
Using the Calculator	1 - 12		
Domain/Range in interval notation	1 - 12	1 - 12	

Directions: For each quadratic equation, describe the following changes...

- a. Vertex new location?
- b. Does the parabola get Stretched or Compressed? Horizontal or Vertical? Factor?
- c. Does the parabola shift left or shift right? How many units?
- d. Does the parabola shift up or shift down? How many units?
- e. Sketch the given equation on the same graph as the parent function. Label.
- f. Domain and Range in interval notation.

1. $y = \frac{1}{2}(x+1)^2 - 4$

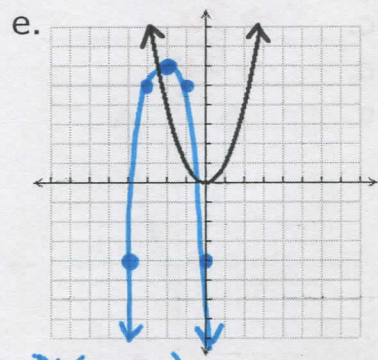
- a. $(-1, -4)$
- b. VC $\frac{1}{2}$
- c. $\leftarrow 1u$
- d. $\downarrow 4u$



- f. $D: (-\infty, \infty)$
 $R: [-4, \infty)$

2. $y = -3(x+2)^2 + 8$

- a. $(-2, 8)$
- b. VS 3
- c. $\leftarrow 2u$
- d. $\uparrow 8u$



- f. $D: (-\infty, \infty)$
 $R: (-\infty, 8]$

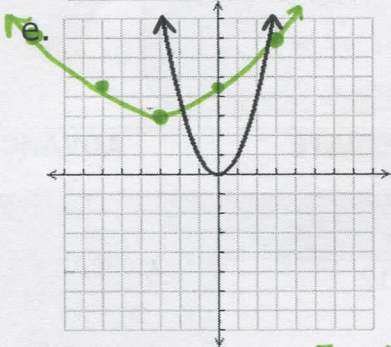
3. $y = \frac{1}{6}(x+3)^2 + 3$

a. $(-3, 3)$

b. $VC \frac{1}{6}$

c. $\leftarrow 3u$

d. $\uparrow 3u$



f. $D: (-\infty, \infty)$ $R: [3, \infty)$

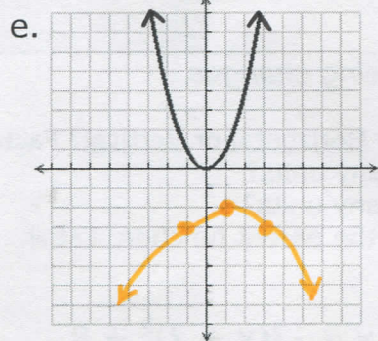
5. $y = -\frac{1}{4}(x-1)^2 - 2$

a. $(1, -2)$

b. $VC \frac{1}{4}$

c. $\rightarrow 1u$

d. $\downarrow 2u$



f. $D: (-\infty, \infty)$ $R: (-\infty, -2]$

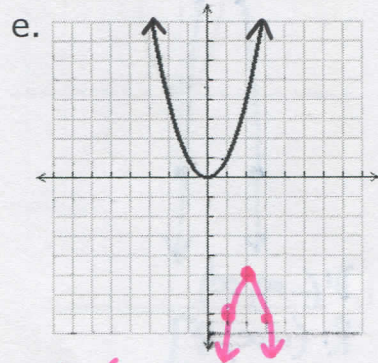
7. $y = -2(x-2)^2 - 5$

a. $(2, -5)$

b. $VS 2$

c. $\rightarrow 2u$

d. $\downarrow 5u$



f. $D: (-\infty, \infty)$
 $R: (-\infty, -5]$

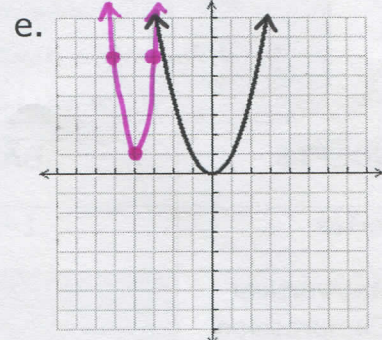
4. $y = 7(x+4)^2 + 1$

a. $(-4, 1)$

b. $VS 7$

c. $\leftarrow 4u$

d. $\uparrow 1u$



f. $D: (-\infty, \infty)$ $R: [1, \infty)$

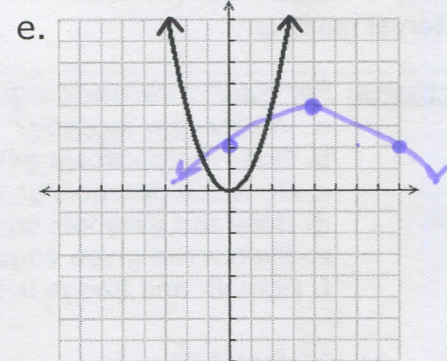
6. $y = -\frac{1}{8}(x-4)^2 + 4$

a. $(4, 4)$

b. $VC \frac{1}{8}$

c. $\rightarrow 4u$

d. $\uparrow 4u$



f. $D: (-\infty, \infty)$ $R: (-\infty, 4]$

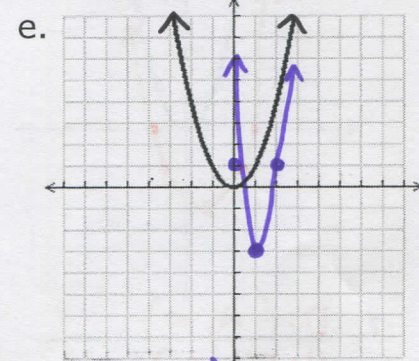
8. $y = 4(x-1)^2 - 3$

a. $(1, -3)$

b. $VS 4$

c. $\rightarrow 1u$

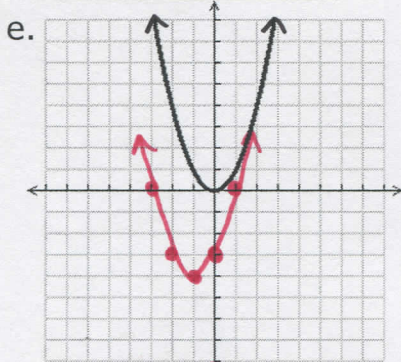
d. $\downarrow 3u$



f. $D: (-\infty, \infty)$
 $R: [-3, \infty)$

9. $y = (x + 1)^2 - 4$

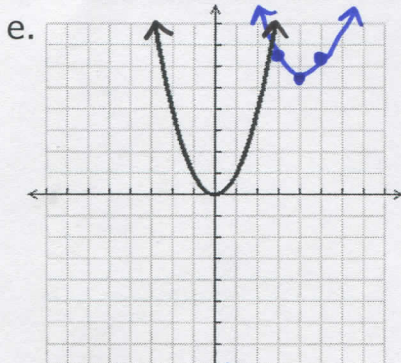
- a. $(-1, -4)$
- b. none
- c. $\leftarrow 1u$
- d. $\downarrow 4u$



- f. $D: (-\infty, \infty)$
 $R: [-4, \infty)$

11. $y = (x - 4)^2 + 5.5$

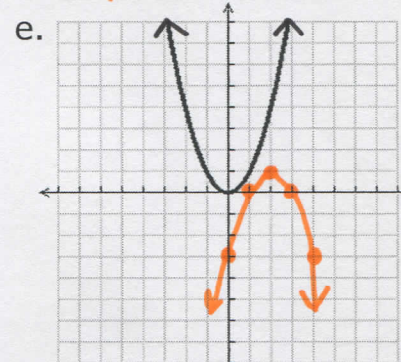
- a. $(4, 5.5)$
- b. none
- c. $\rightarrow 4u$
- d. $\uparrow 5.5u$



- f. $D: (-\infty, \infty)$
 $R: [5.5, \infty)$

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

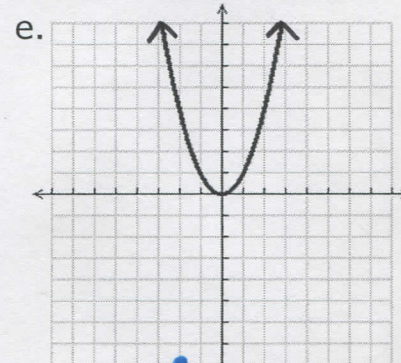
- a. $(2, 1)$
- b. none
- c. $\rightarrow 2u$
- d. $\uparrow 1u$



- f. $D: (-\infty, \infty)$
 $R: (-\infty, 1]$

12. $y = -(x + 2)^2 - 8$

- a. $(-2, -8)$
- b. none
- c. $\leftarrow 2u$
- d. $\downarrow 8u$



- f. $D: (-\infty, \infty)$
 $R: (-\infty, -8]$

CYU Reflection: How far can you go: basic, intermediate, or advanced?

Rate your mastery level!

How confident are you with the skills this CYU covered? Circle the score you would give yourself.

