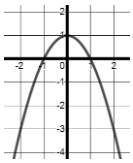
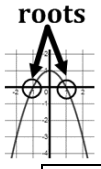
Name: _____

Semester 2 Final Review C
Quadratic Graphs

Write the roots as points.

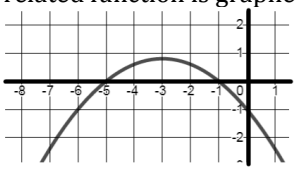
Example:
What are the root(s) of the quadratic equation whose related function is graphed?



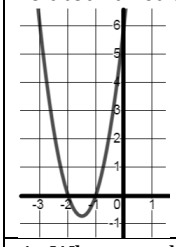


The roots are $\boxed{(-1,0)\ \&\ (1,0)}$.

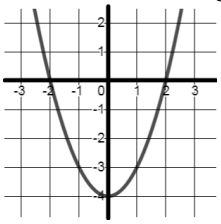
1. What are the root(s) of the quadratic equation whose related function is graphed?



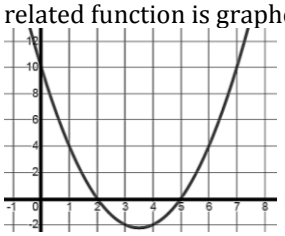
2. What are the root(s) of the quadratic equation whose related function is graphed?



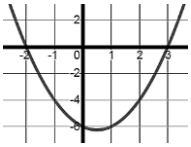
3. What are the root(s) of the quadratic equation whose related function is graphed?



4. What are the root(s) of the quadratic equation whose related function is graphed?



5. What are the root(s) of the quadratic equation whose related function is graphed?

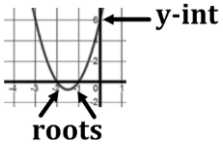


Write the solutions in reduced radical form.

Example:
Which of the following represents the graph of $f(x) = 3(x-1)(x-2)$?

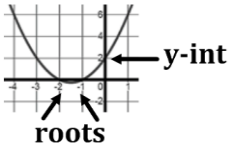
The roots are the opposite numbers from the factors:
$(x-1)$ *is a factor, so* 1 *is a root &* $(x-2)$ *is a factor, so* 2 *is a root.* ***The roots are 1 & 2.***
The y-intercept is when x=0: $y = 3(0-1)(0-2) = 3(-1)(-2) = 6$. ***The y-int is 6.***

A.



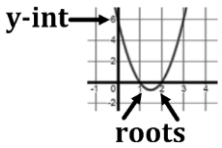
roots: -2 & -1
y-int: 6

B.



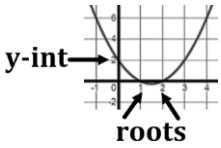
roots: -2, & -1
y-int: 2

C.



roots: 1 & 2
y-int: 6

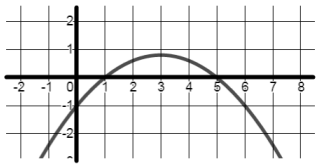
D.



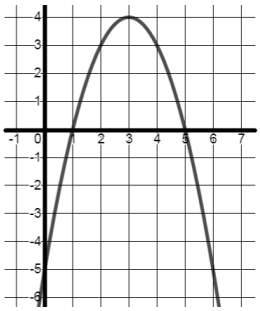
roots: 1 & 2
y-int: 2

6. Which of the following represents the graph of $f(x) = -(x-1)(x-5)$?

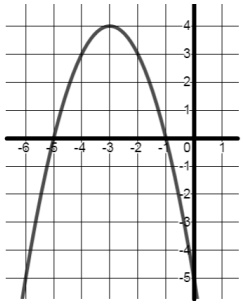
A.



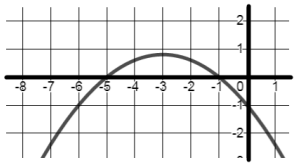
B.



C.

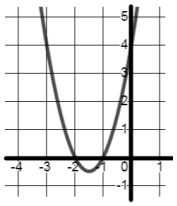


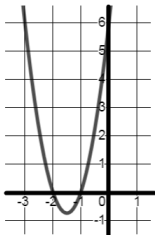
D.

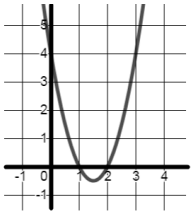


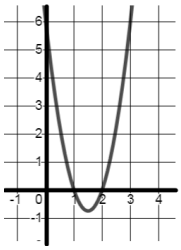
Name: _____

7. Which of the following represents the graph of $f(x) = 2(x+2)(x+1)$?

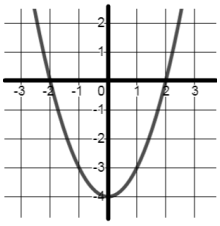
A. 

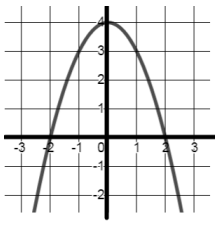
B. 

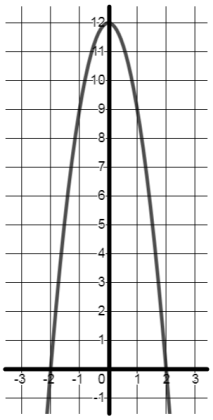
C. 

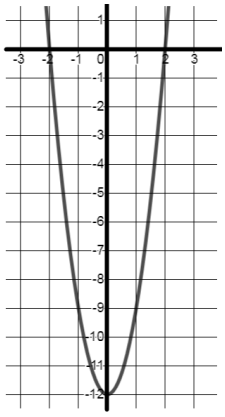
D. 

8. Which of the following represents the graph of $f(x) = 3(x+2)(x-2)$

A. 

B. 

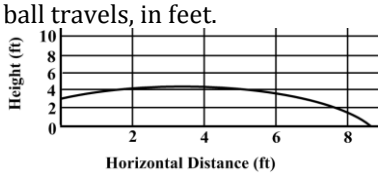
C. 

D. 

Determine the factors, the simplest form of the quadratic equation, and the *x*-intercepts from the given solutions.

Example:

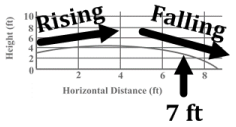
Clark hits a baseball up into the air from a height of 3 feet. The graph represents the height of the baseball above the ground, in feet, as a function of the horizontal distance the ball travels, in feet.



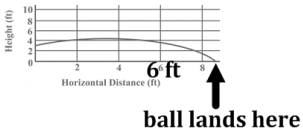
Describe the path of the ball.

a. At 7 ft is the ball rising or falling?

At 7 ft, the ball is falling

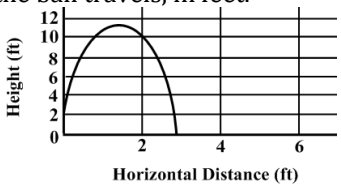


b. Does the ball land at 6 ft away, at more than 6 ft away or at less than 6 ft away?



The ball lands more than 6 ft away.

9. Shaun hits a baseball up into the air from a height of 3 feet. The graph represents the height of the baseball above the ground, in feet, as a function of the horizontal distance the ball travels, in feet.

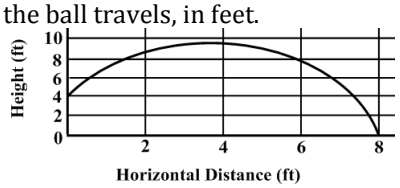
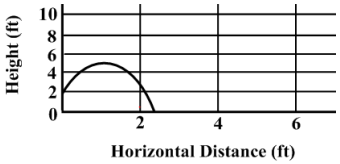


Describe the path of the ball.

a. At 2 ft, away is the ball rising or falling?

b. Does the ball land at 4 ft away, at more than 4 ft away or at less than 4 ft away?

Name: _____

10. Heather hits a baseball up into the air from a height of 4 feet. The graph represents the height of the baseball above the ground, in feet, as a function of the horizontal distance the ball travels, in feet.  Describe the path of the ball. a. At 1 ft, away is the ball rising or falling? b. Does the ball land at 8 ft away, at more than 8 ft away or at less than 8 ft away?	11. Nadia hits a baseball up into the air from a height of 2 feet. The graph represents the height of the baseball above the ground, in feet, as a function of the horizontal distance the ball travels, in feet.  Describe the path of the ball. a. At 2 ft, away is the ball rising or falling? b. Does the ball land at 1 ft away, at more than 1 ft away or at less than 1 ft away?

Semester 2 Final Review C
Quadratic Graphs Answers:

1. (-5, 0) & (-1, 0)	2. (-1, 0) & (-2, 0)	3. (-2, 0) & (2, 0)	4. (2, 0) & (5, 0)	5. (-2, 0) & (3, 0)	
6. B	7. A	8. D	9a. Falling 9b. Less than 4 ft away	10a. Rising 10b. At 8 ft away	11a. Falling 11b. More than 1 ft away