

Lessons 2.3 and 2.4 Quiz Review

Find the zeros of each function by factoring.

1) $x^2 + 6x + 9 = 0$

2) $5r^2 - 9r = 2$

Finding Zeros



Box Method



3) $9x^2 - 16 = 0$

4) $2x^2 - 25x + 12 = 0$

British Method



No "b" Term



5) $7r^2 + 5r = 0$

6) $9x^2 + 15x = 0$

No "c" Term



Write a quadratic function in standard form for each given set of zeros.

7) -2 and 7

8) 1 and -8

9) 0 and -9



Find the zeros of each function by using a graph and table.

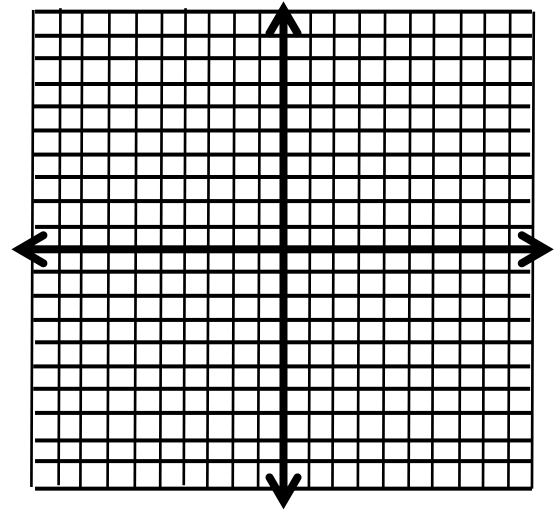
10) $f(x) = x^2 + 8x + 15$

a = _____ b = _____ c = _____

Vertex: _____

Zeros: _____

x					
y					



Solve.

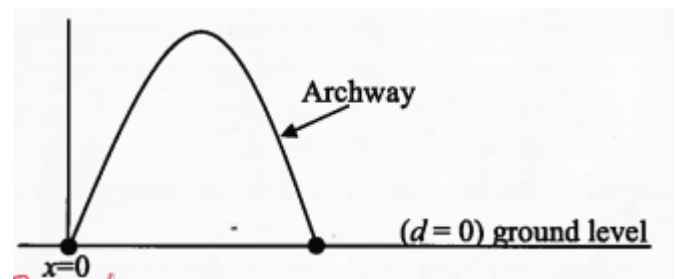
11) The quadratic function that approximates the height of a javelin thrown is $h(t) = -0.08t^2 + 4.48$, where t is the time in seconds after it is thrown and h is the javelin's height in feet.



- a. What is the javelin's maximum height?

- b. How long will it take for the javelin to hit the ground?

12) The entrance to an athletic field is in the shape of a parabolic archway. The archway is modeled by the equation $d(x) = -x^2 + 12x$, where $d(x)$ represents the distance, in feet, that the arch is above the ground for any horizontal distance x , in feet, across the ground.



- a. What is the maximum height of the archway?

- b. How wide is the archway?

Find the zeros of each equation by taking the square root.

13) $6x^2 - 13 = 41$

14) $8r^2 + 6 = 510$



15) $64x^2 - 6 = 43$

16) $5n^2 - 3 = 197$

Solve each equation by completing the square.

17) $x^2 + 14x = 24$

18) $4x^2 + 32x = -16$



19) $a^2 - 16a - 8 = 0$

20) $10v^2 - 20v - 80 = 0$

Write each function in vertex form, and identify the vertex.

21) $x^2 - 4x - 17 = 0$

22) $x^2 + 6x + 11 = 0$



Vertex = _____

Vertex = _____