

Ch. 4 Part 1 Practice Test

1) Given the function $f(x) = x^2 - 8x + 12$ find the following.

- a) Rewrite this function into factored form?
- b) Rewrite this function into vertex form?

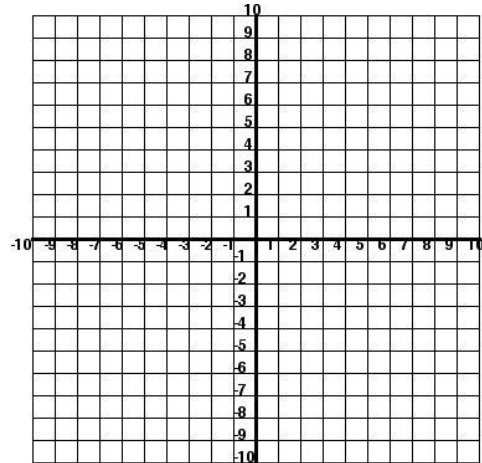
2) Given the function $f(x) = x^2 + 2x - 8$

- a) What are the x-intercepts?
- e) Graph the function with at least 3 points.

b) What is the vertex?

c) What is the y-intercept?

d) What is the vertex form of the equation?



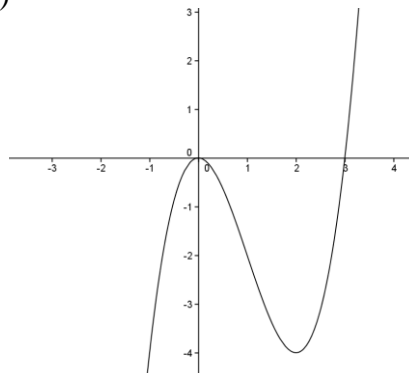
3) Given the function $y = (5x + 3)(4x - 1)$

- a) What are the x-intercepts?
- b) What are the zeros?

c) What would the function be in y-intercept form?

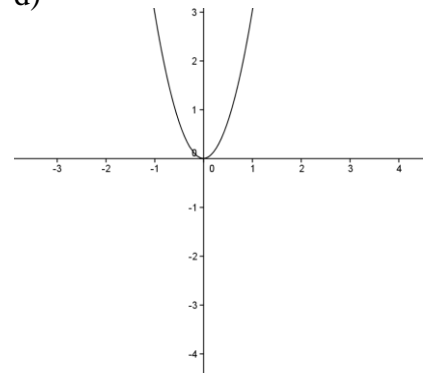
4) Circle all of the examples of a quadratic function.

a) $y = x^2 - 4$ c)



b) $y = x + 4$

d)



5) Solve the following quadratic function equations.

a) $32 = (x - 2)^2$

b) $6 = \frac{1}{6}x^2$

6) Find the zeros/roots of the equations below.

a) $y = 3x^2 - 3x - 18$

b) $y = x^2 - 5x - 14$

7) Find the zeros/roots of the equations below.

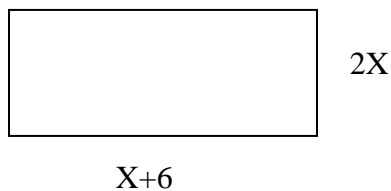
a) $y = (x - 2)^2 - 4$

b) $y = 2(x - 1)^2 - 54$

8) Change the function from standard form into vertex form, and then state the vertex.

$$y = 4x^2 - 8x - 3$$

9) Find the lengths of each of the sides of the fence below, given that the area is 32 yards squared.



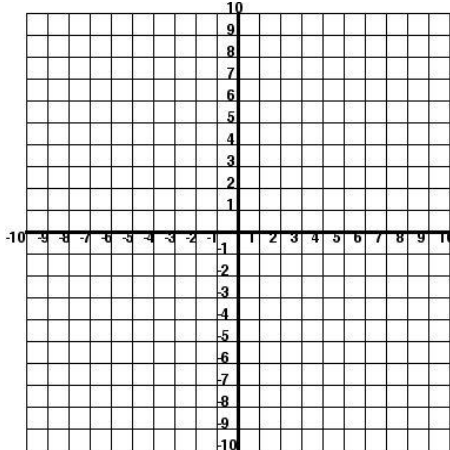
10) Solve the equation for the variable x .

$$-16 = x^2 - 10x$$

11) $y = 2x^2 - x$

Does the parabola open up or down?

Graph the function below



What is the y-intercept of the parabola?

What is the vertex of the equation?

What is the axis of symmetry?

What is the vertex form of the equation?

What are the zeros of the equation?

What are the x-intercepts?

What is the x-intercept form of the equation?

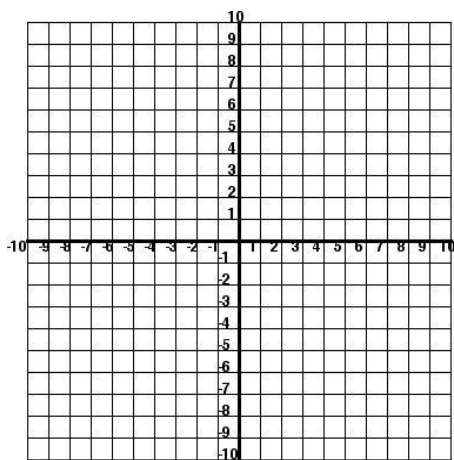
12) Simplify the following radical expressions

a) $\sqrt{72}$ b) $\sqrt{18} \cdot \sqrt{2}$ c) $\sqrt{\frac{28}{25}}$

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

Does the parabola open up or down?

Graph the function



What is the vertex of the equation?

What is the axis of symmetry?

What are the zeros of the equation?

What are the x-intercepts?

14) Find the zeros of the functions below by factoring.

a) $y = x^2 - 49$ b) $y = x^2 + 11x + 30$ c) $y = 2x^2 - 9x + 4$