

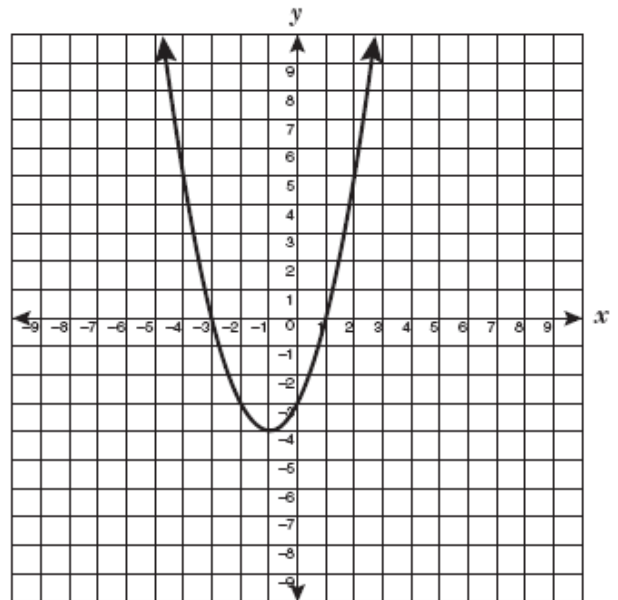
NAME \_\_\_\_\_

DATE \_\_\_\_\_

PER. \_\_\_\_\_

**ANALYZING QUADRATIC FUNCTIONS – DAY 1****1. Use the graph below to answer the following questions.**

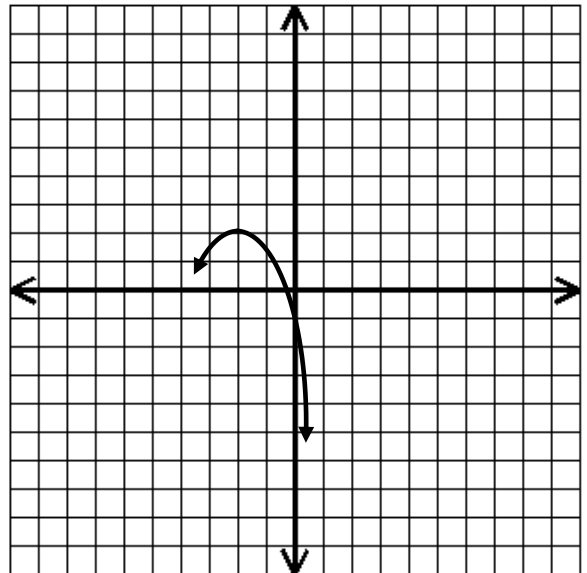
- a) What is the vertex?
- b) What is the y-intercept?
- c) What is the line of symmetry?
- d) What are the x-intercepts?
- e) What is the minimum point?



- f) What is the best estimate of the negative value of  $x$  which this function equals 6?

**2. Use the graph below to give the best estimates for the following.**

- a) What is the y-intercept?
- b) What is the vertex?
- c) What is the axis of symmetry?
- d) What are the x-intercepts?



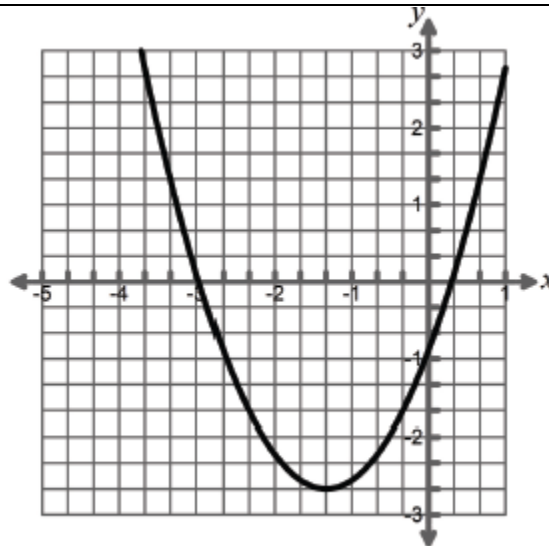
3. State the vertex of the graph below.

A  $\left(-1\frac{2}{3}, -2\frac{2}{3}\right)$

B  $\left(-1\frac{1}{3}, -2\frac{2}{3}\right)$

C  $\left(-2\frac{1}{3}, -3\frac{2}{3}\right)$

D  $\left(-2\frac{2}{3}, -1\frac{1}{3}\right)$



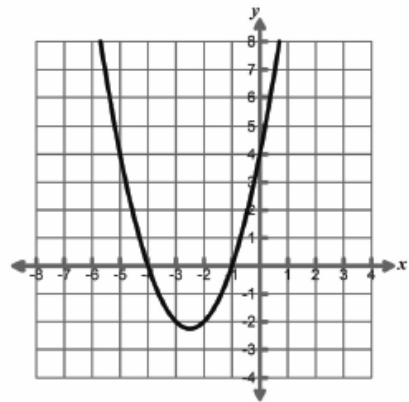
4. Which of the following points is an x-intercept of the function shown in the graph?

A. (0, 4)

B. (4, 0)

C. (0, -4)

D. (-4, 0)



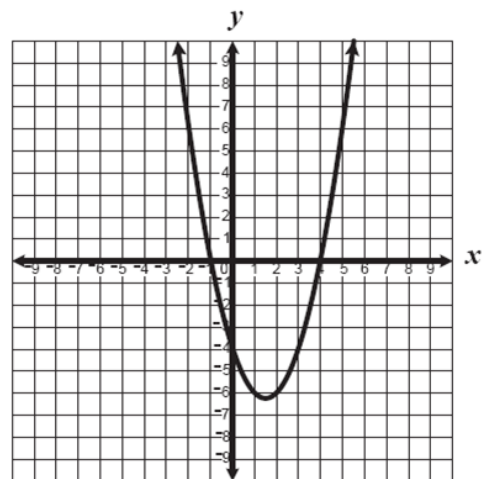
5. The graph of the equation  $y = x^2 - 3x - 4$  is shown below. For what value or values of  $x$  is  $y = 0$ ?

A.  $x = -1$  only

B.  $x = -4$  only

C.  $x = -1$  and  $x = 4$

D.  $x = 1$  and  $x = -4$



6. What is the slope of the line  $6x - 2y = 18$ ?

A. 3

C. -3

B.  $\frac{1}{3}$

D.  $-\frac{1}{3}$

7. What are the x- and y-intercepts of the line  $5x - 2y = 20$ ?

- A. x-int(-10, 0) and y-int (0, 4)      C. x-int(4, 0) and y-int (0, -10)  
B. x-int(10, 0) and y-int (0, 4)      D. x-int(10, 0) and y-int (0, -4)

8. Solve:  $3(x + 4) - 2(x + 6) = 6(x - 5)$

- A. 6      C. -6  
B. -9      D. 9

9. The side of a square is  $2x + 5$ . What is the area of the square in terms of  $x$ ?

- A.  $2x^2 + 25$       C.  $4x^2 + 25$   
B.  $4x^2 + 20x + 25$       D.  $4x + 10$

**Solve by factoring.**

10.  $x^2 - 2x - 24 = 0$

11.  $2x^2 = 32$

12.  $x^2 - 8x = 65$