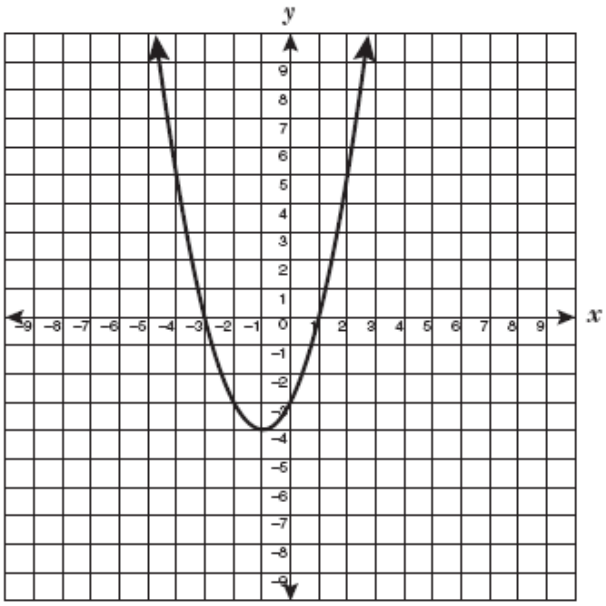
NAME_____DATE_____PER._____

# INTRO TO QUADRATIC FUNCTIONS

**1. Use the graph below to answer the following.**



a) Vertex: _____ Max or Min?

b) y-intercept: _____

c) Line of symmetry: _____

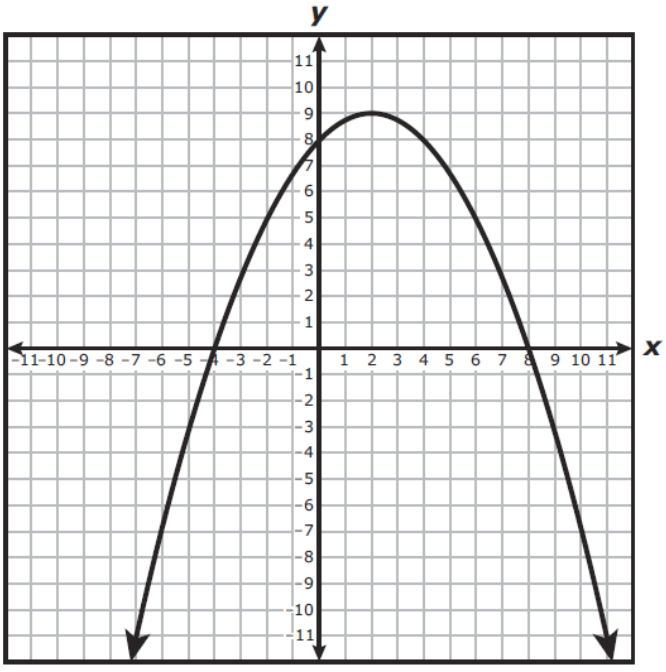
d) x-intercepts: _____

e) Domain: _____ Range: _____

e) The minimum value of the function is _____ when x is _____.

f) What is the best estimate of the negative value of x which this function equals 5? _____

**2. Use the graph below to answer the following.**



a) What is the maximum point? _____

b) Axis of symmetry: _____

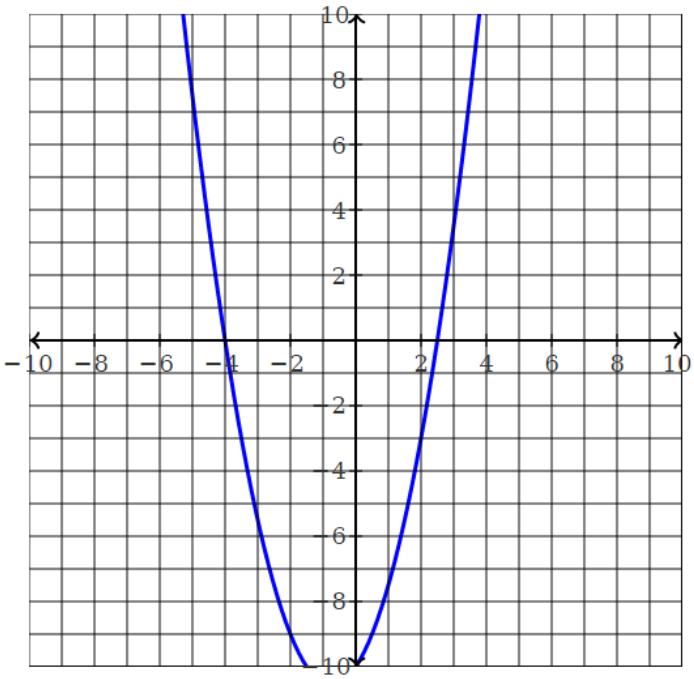
c) x-intercepts: _____

d) y-intercept: _____

e) Domain: _____ Range: _____

f) When x is 6, y = _____.

**3. Use the graph below to answer the following.**



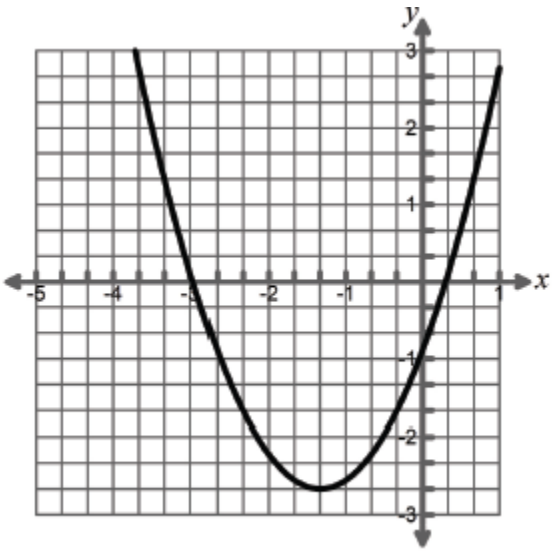
_____Which of the following statements about the graph is true?

A) The domain is all x values greater than -4.
B) The function crosses the y-axis below -9.
C) The function has a maximum value.

_____Between which two integers is an x-intercept of the function located?

A) -2 and -1
B) 3 and 4
C) 2 and 3
D) 0 and 1

_____ **4. State the vertex of the graph below.**



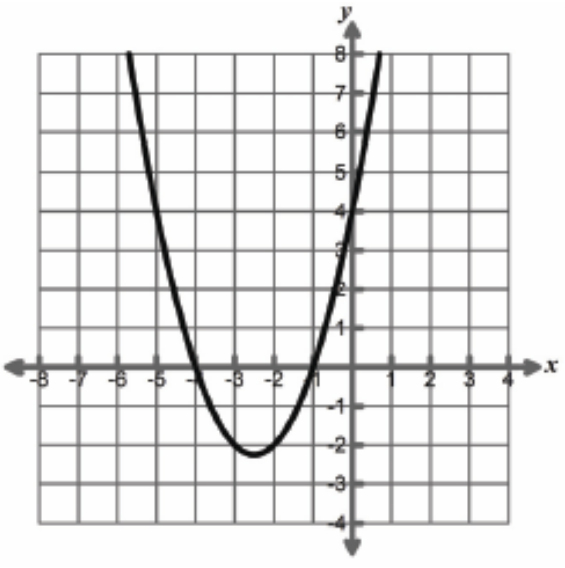
A $\left(-1\frac{2}{3},-2\frac{2}{3}\right)$

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

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

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

_____**5. 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)

_____ **6. Which statement about the quadratic parent function is true?**

**A.** Its graph is symmetrical about the *x*-axis.

**B.** Its graph is symmetrical about the *y*-axis.

**C.** Its domain is the set of all non-negative numbers.

**D.** Its range is the set of all real numbers.

**Review. Show all work.**

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

A. 3

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

C. –3

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

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

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

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

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

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

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

A. 6

B. -9

C. -6

D. 9

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

A. $2x^2 + 25$

B. $4x^2 + 20x + 25$

C. $4x^2 + 25$

D. $4x + 10$