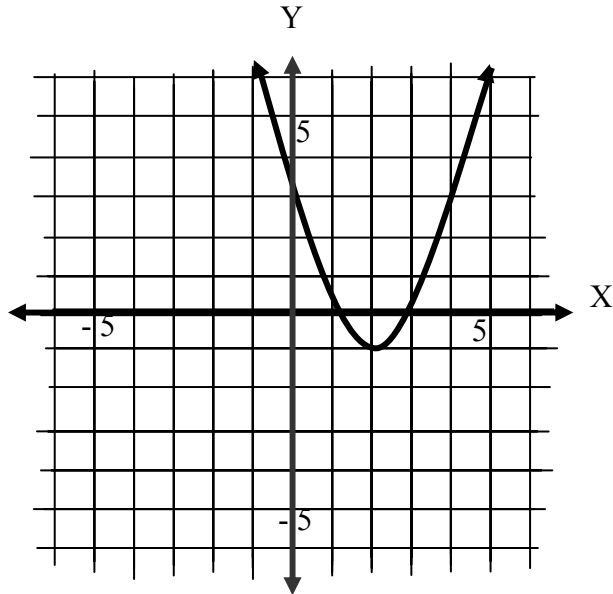


Math 0090 Lab Worksheet #14

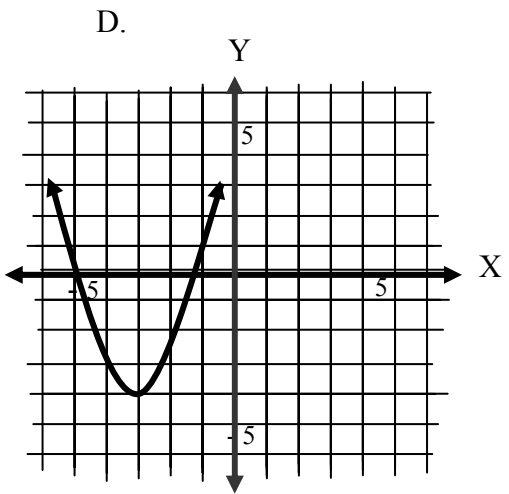
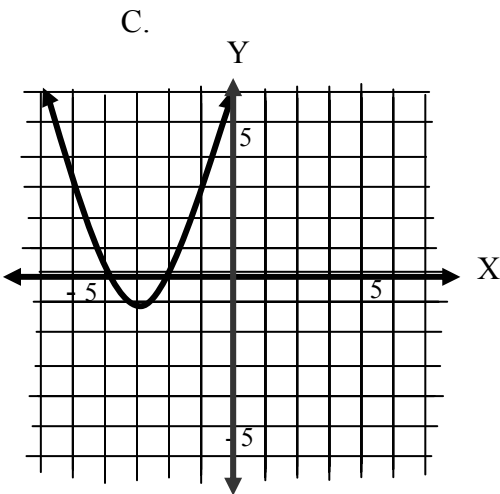
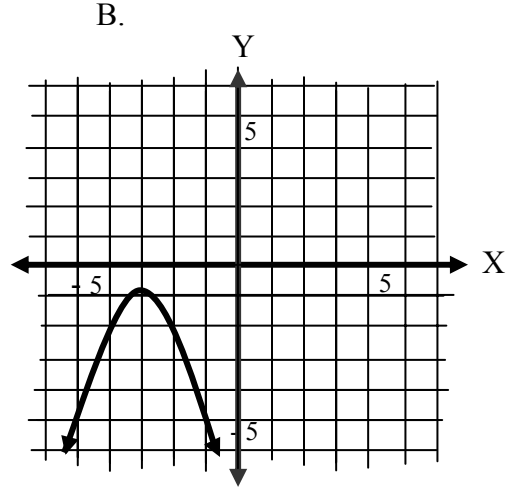
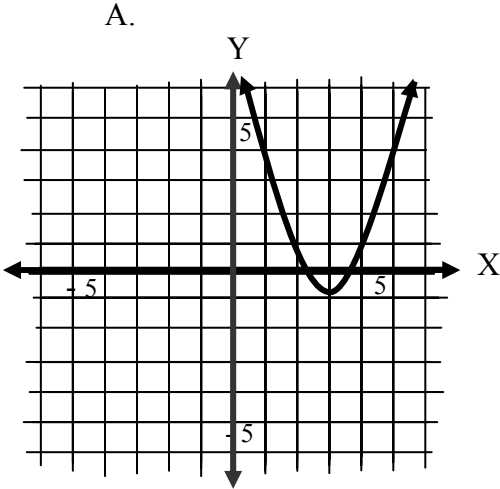
Objective: Solve problems #1 - #10 involving graphs of quadratic equations.
Problems #11 through #15 are review problems.

1. Which equation represents the graph below?

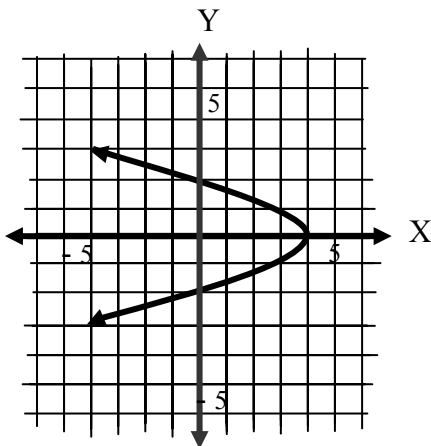


- A. $y = x^2 - 4x - 3$
- B. $y = -x^2 - 4x + 3$
- C. $y = x^2 - 4x + 3$
- D. $y = x^2 + 4x + 3$
2. If $y = 2x^2 - 4x$, then which of the following is not a valid statement?
- A. The graph of the equation passes through the origin.
- B. The graph of the equation is a parabola whose vertex is at $(-1, 2)$.
- C. The graph of the equation is a parabola whose vertex is at $(1, -2)$.
- D. The x -intercepts of the graph of the equation are $(0,0)$ and $(2,0)$.
3. If $y = -x^2 + 4x - 5$, then which of the following statements is true?
- A. The graph of the equation passes through the point $(1,0)$.
- B. The graph of the equation passes through the point $(-1, -8)$.
- C. The graph of the equation is a parabola whose vertex is at $(2, 7)$.
- D. The graph of the equation does not have any x -intercepts.

4. Which graph best represents the equation $y = x^2 + 6x + 8$?



5. Which equation represents the graph below?



A. $x = -y^2 - 4$

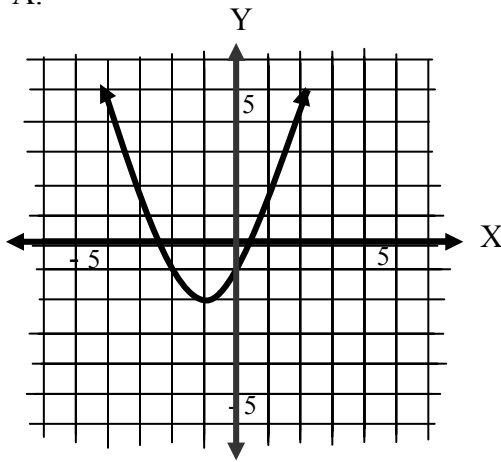
B. $x = -y^2 + 4$

C. $x = y^2 - 4$

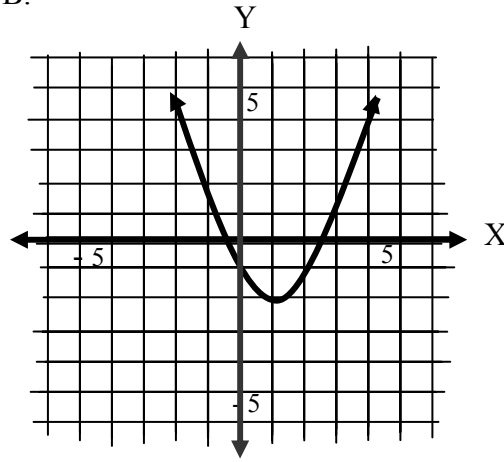
D. $x = y^2 + 4$

6. Which graph best represents the equation $y = x^2 + 2x - 1$?

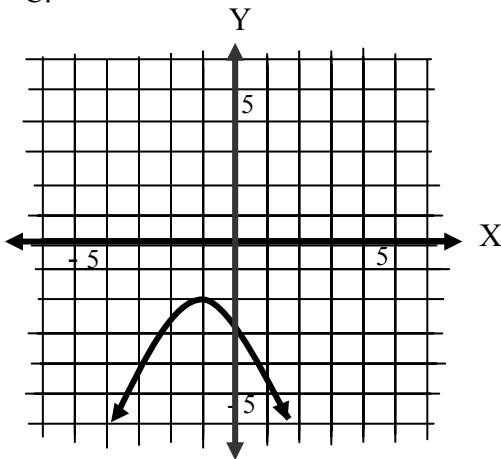
A.



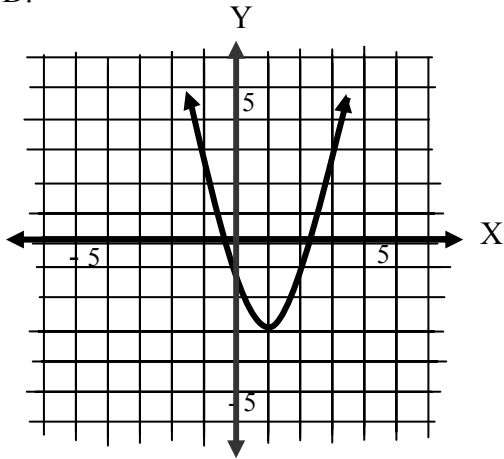
B.



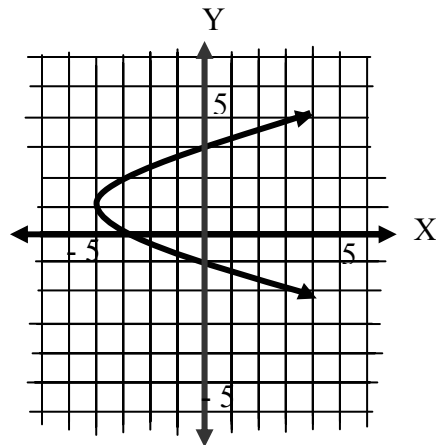
C.



D.



7. Which equation represents the graph below?



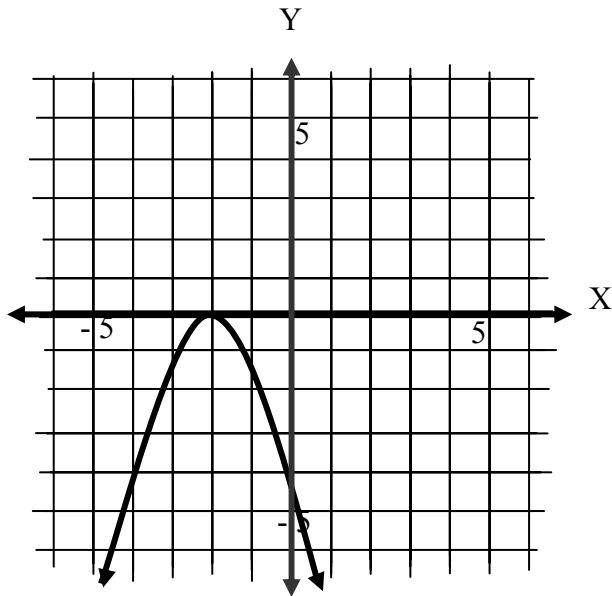
A. $x = -y^2 - 2y - 3$

B. $x = -y^2 + 2y - 3$

C. $x = y^2 - 2y - 3$

D. $x = y^2 + 2y + 3$

8. Which equation represents the graph below?



- A. $y = -x^2 - 4x - 4$
- B. $y = -x^2 + 4x - 4$
- C. $y = -x^2 - 4x + 4$
- D. $y = -x^2 + 4x + 4$
9. If $y = -2x^2 + 4x + 3$, then which of the following is not a valid statement?
- A. The graph of the equation is a parabola whose vertex is at $(-1, -3)$.
- B. The graph of the equation is a parabola whose vertex is at $(1, 5)$.
- C. The line of symmetry is $x = 1$.
- D. The graph of the equation passes through the point $(0, 3)$.
10. A ball that was hit had an initial upward velocity of 144 feet per second. If $h = 144t - 16t^2$ where h is the height (in feet) of the ball at time t (seconds), then which of the following statements is true?
- A. The ball traveled 272 ft in 1 second.
- B. The graph of the equation is a parabola, which opens up.
- C. The ball returned to the ground in 3 seconds.
- D. The ball returned to the ground in 9 seconds.

11. A number N is 12 less than the square of the sum of another number M and 5. Which of the following expresses this relationship?
- A. $N = 12 - (M+5)^2$
 - B. $N = 12 - 2(M+5)$
 - C. $N = M^2 + 5 - 12$
 - D. $N = (M+5)^2 - 12$
12. Simplify: $\frac{x^2 - 2x}{4} \cdot \frac{4x + 8}{x^2 - 4}$
- A. $x - 1$
 - B. x
 - C. $\frac{x(x+8)}{2}$
 - D. $x^2 + 4x$
13. Find the slope of the line that passes through the points $(-5, 9)$ and $(-2, 13)$.
- A. $-\frac{4}{3}$
 - B. $-\frac{4}{7}$
 - C. $\frac{4}{7}$
 - D. $\frac{4}{3}$
14. If $\frac{4}{5}x + 2 = \frac{29}{10}$, what is the value of $8x - 2$?
- A. $\frac{7}{3}$
 - B. $\frac{13}{2}$
 - C. 7
 - D. $\frac{31}{4}$
 - B. 2
15. After deductions totaling 28% of his pay Jose received a paycheck of \$2,160. What was his pay before deductions?
- A. \$604.80
 - B. \$2,188.00
 - C. \$2,764.80
 - D. \$3,000.00