

# 9

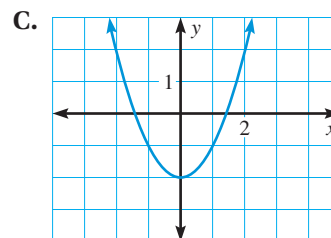
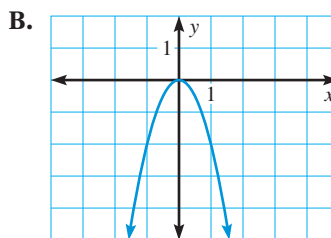
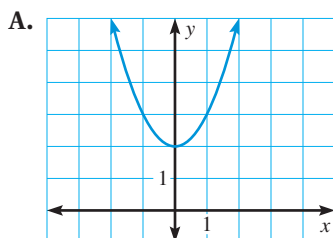
# CHAPTER TEST

Match the quadratic function with its graph.

1.  $y = x^2 - 2$

2.  $y = x^2 + 2$

3.  $y = -2x^2$



Graph the function. Label the vertex and axis of symmetry.

4.  $y = 2x^2 + 6x - 5$

5.  $y = -4x^2 - 8x + 25$

6.  $y = \frac{1}{4}x^2 - x - 7$

Approximate the zeros of the function to the nearest tenth.

7.  $f(x) = x^2 + 5x + 1$

8.  $f(x) = x^2 - 8x + 3$

9.  $f(x) = -3x^2 - 2x + 5$

Solve the equation. Round your solutions to the nearest hundredth, if necessary.

10.  $3x^2 = 108$

11.  $-5w^2 + 51 = 6$

12.  $-p^2 + 2p + 3 = 0$

13.  $-2t^2 + 6t + 9 = 0$

14.  $5m^2 - m = 5$

15.  $2x^2 - 12x - 1 = -7x + 6$

Solve the system using the substitution method or a graphing calculator.

16.  $y = 3x - 2$   
 $y = -x^2 + 2x + 4$

17.  $x + y = -3$   
 $y = 2x^2 + x - 7$

18.  $2x - y = 2$   
 $y = -2x^2 - 4x + 6$

Tell whether the table of values represents a *linear function*, an *exponential function*, or a *quadratic function*. Then write an equation for the function.

19. 

<b>x</b>	-3	-2	-1	0	1	2
<b>y</b>	18	8	2	0	2	8

20. 

<b>x</b>	-4	0	4	8	12	16
<b>y</b>	1	2	3	4	5	6

21. **TENNIS** In a tennis match, a player hits the ball and the opponent fails to return it. The ball reaches a maximum height of 20 feet and hits the ground at a horizontal distance of 50 feet from where it was hit.

- What type of function should you use to represent the path of the ball? Sketch a graph of the path of the ball.
- In the context of the given situation what do the intercepts and maximum point represent?