

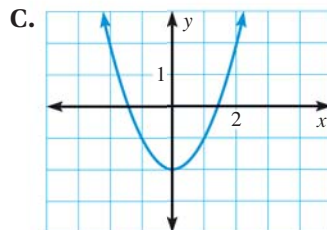
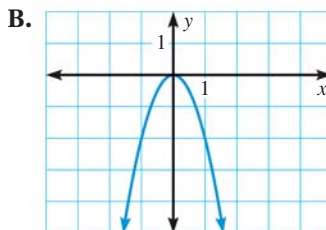
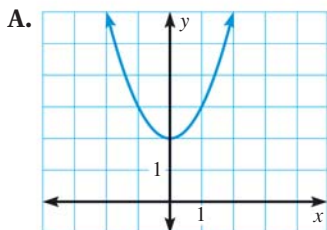
# 10 CHAPTER TEST

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

Tell whether the equation has *two solutions*, *one solution*, or *no solution*.

16.  $3x^2 - 4x + 9 = 0$

17.  $4g^2 - 12g + 11 = 0$

18.  $-2n^2 + 7n - 1 = 0$

19.  $-m^2 - 17m = 0$

20.  $-6x^2 - x - 5 = 0$

21.  $10x^2 - 13 = 0$

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

22. 

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

23. 

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

24. **TENNIS** You are playing tennis with a friend. The path of the tennis ball after you hit the ball can be modeled by the graph of the equation  $y = -0.005x^2 + 0.17x + 3$  where  $x$  is the horizontal distance (in feet) from where you hit the ball and  $y$  is the height of the ball (in feet) above the court.

- What is the maximum height reached by the tennis ball? Round your answer to the nearest tenth of a foot.
- Suppose you are standing 30 feet from the net, which has a height of 3 feet. Will the ball clear the net? *Explain* your reasoning.
- If your friend does not hit the ball back to you, how far from you does the ball strike the ground?