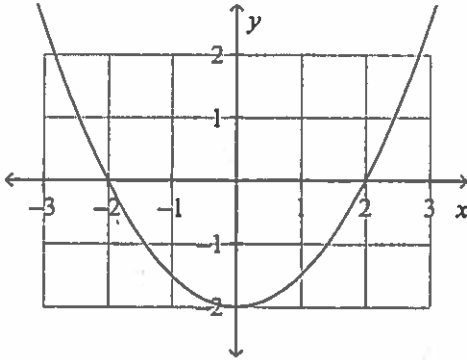


**Chapter 10 Part 1 Practice Test (Sections 10.1-10.4)**

**Multiple Choice**

Identify the choice that best completes the statement or answers the question.

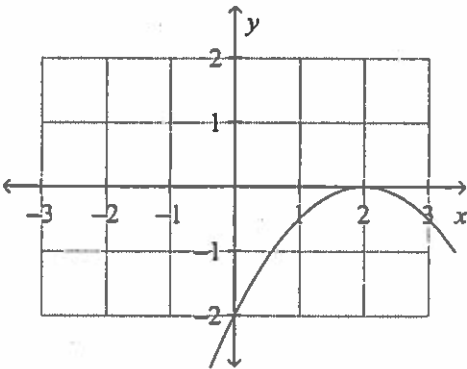
- \_\_\_\_ 1. Identify the vertex of the graph. Tell whether it is a minimum or maximum.



- |                     |                     |
|---------------------|---------------------|
| a. (0, -2); maximum | c. (-2, 0); maximum |
| b. (0, -2); minimum | d. (-2, 0); minimum |

- \_\_\_\_ 2. A parabola \_\_\_\_\_ has an axis of symmetry.
- |           |              |          |
|-----------|--------------|----------|
| a. always | b. sometimes | c. never |
|-----------|--------------|----------|

- \_\_\_\_ 3. Identify the vertex of the graph. Tell whether it is a minimum or maximum.



- |                    |                    |
|--------------------|--------------------|
| a. (2, 0); minimum | c. (0, 2); minimum |
| b. (2, 0); maximum | d. (0, 2); maximum |

4. What is the equation for the axis of symmetry?

Name: \_\_\_\_\_

A

5. Order the group of quadratic functions from widest to narrowest graph.

a.  $y = -7x^2$ ,  $y = -\frac{1}{5}x^2$ ,  $y = -\frac{1}{3}x^2$

b.  $y = \frac{2}{3}x^2$ ,  $y = -2x^2$ ,  $y = \frac{4}{3}x^2$

Widest: \_\_\_\_\_

Widest: \_\_\_\_\_

Middle: \_\_\_\_\_

Middle: \_\_\_\_\_

Narrowest: \_\_\_\_\_

Narrowest: \_\_\_\_\_

6. Find the equation of the axis of symmetry and the coordinates of the vertex of the graph of the function.

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

AOS: \_\_\_\_\_

Vertex: \_\_\_\_\_

7. Solve the equation using square roots.  $x^2 + 5 = 41$

$x = \underline{\hspace{2cm}}$

$x = \underline{\hspace{2cm}}$

8. Solve the equation using square roots.  $-x^2 + 16 = 0$

$x = \underline{\hspace{2cm}}$

$x = \underline{\hspace{2cm}}$

9. Solve the equation using square roots.  $4x^2 = 36$

$x = \underline{\hspace{2cm}}$

$x = \underline{\hspace{2cm}}$

10. Solve the equation using square roots.  $6x^2 = 32$

$x = \underline{\hspace{2cm}}$

$x = \underline{\hspace{2cm}}$

Name: \_\_\_\_\_

A

11. Solve the equation.  $(x - 1)(x - 4) = 0$

$x =$  \_\_\_\_\_

$x =$  \_\_\_\_\_

12. Solve the equation.  $(2x + 10)(8x - 3) = 0$

$x =$  \_\_\_\_\_

$x =$  \_\_\_\_\_

13. Solve the equation using factoring:  $z^2 - 7z - 18 = 0$

$x =$  \_\_\_\_\_

$x =$  \_\_\_\_\_

14. Solve the equation.  $x^2 + 10x + 24 = 0$

$x =$  \_\_\_\_\_

$x =$  \_\_\_\_\_

15. Solve  $x^2 - 4x = 5$

$x =$  \_\_\_\_\_

$x =$  \_\_\_\_\_

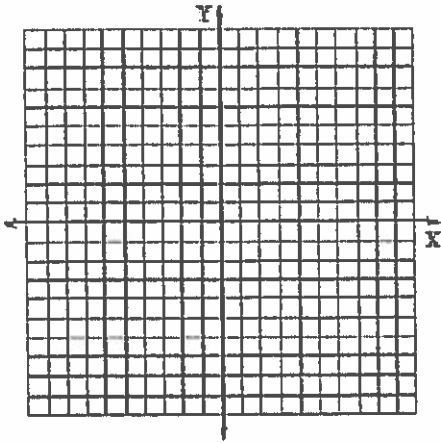
16. Describe at least 3 details (how it opens, width, axis, vertex, roots, etc.) about the function,  $f(x) = -5x^2 + 20x - 10$ .

- a.) opens up, wide, axis of symmetry of 2, vertex of (2, 10)
- b.) opens down, skinny, axis of symmetry of 2, vertex of (2, 10)
- c.) opens down, wide, axis of symmetry of 10, vertex of (10, 2)

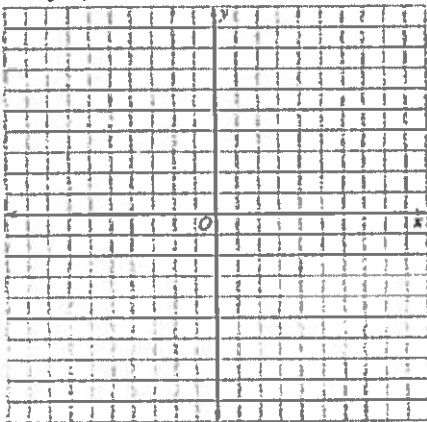
Name: \_\_\_\_\_

A

17. Graph  $f(x) = x^2 + 2x - 1$ . First find the axis of symmetry and then set up a table.



18. Graph  $y = -x^2 - 2x + 8$ . Find the axis of symmetry and then set up a table.



19. Graph  $f(x) = 2x^2 - 4x + 1$ . First find the axis of symmetry and then set up a table.

