## 1-2 Find the axis of symmetry of the following quadratics.

1. 
$$f(x) = x^2 + 18x - 13$$

ANSWER:

- 3-4 Change the following functions from Standard Form to Vertex Form.
- 3.  $f(x) = x^2 6x 10$

ANSWER:

5-6 Change the following functions from Vertex Form to Standard Form.

5.  $f(x) = (x+2)^2 - 22$ 

ANSWER:

7-8 Find the Max or Min value for the following quadratics. Hint: You will need to find the vertex.

8.  $h(x) = -7x^2 - 3x - 3$ 7.  $f(x) = 2x^2 + 8x - 3$ 

ANSWER:

9-10 Identify the transformation of the quadratics. Hint: You will need to put them in vertex form.

9.  $m(x) = -x^2 + 12x + 1$ 10.  $t(x) = 2x^2 + 12x - 1$ 

ANSWER:

ANSWER:

ANSWER:

ANSWER:

6.  $g(x) = -3(x-2)^2 + 7$ 

ANSWER:

2.  $g(x) = -3x^2 + 24x - 5$ 

ANSWER:

4.  $g(x) = -x^2 + 6x + 7$ 

11-14 Find the zeros for the following quadratics.

11. 
$$f(x) = (x - 3)(x + 10)$$

ANSWER:

13. h(x) = (2x - 3)(6x + 5)

ANSWER:



15-17 Solve the Functions Using the given graphs.

15. The graph below is the function  $f(x) = x^2 - 4$ , the related graph to the given equation. Use the graph to solve the given equation.

$$x^2 - 4 = 0$$



16. Use the given graph to solve the given equation using points of intersection:



 $f(x) = (x + 3)^2$ 

g(x) = 2

18. Find the axis of symmetry, vertex, y-intercept, and two points of the function below and graph it in the given coordinate plane. Then state the solutions.

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

Axis of Symmetry:

Vertex:

Y-Intercept:

Two Points:

Solutions

*У* **↑** 6 5-4 3. 2 1 0 -6 -5 -4 -3 -2 -1 2 3 4 5 6 1 1 2 -3 -4--5 -6

19-22 Find the value of the Discriminant, then use it to find the number and type of solutions.

 $19. -4x^2 - 2x - 11 = 0$ 

20.  $8x^2 + 6x - 18 = -16$ 

ANSWER:	ANSWER:	
21. $x^2 + 4x - 1 = -5$	22. $12x^2 - 2x - 18 = 0$	
ANSWER:	ANSWER:	

23. A pie is launched at a velocity of 32 feet per second into the air from a platform 8 feet above a circus clown. The following equation represents the height of the pie from the clown's head,  $h(t) = -16t^2 + 32t + 8$  where t is time in seconds. What is the max height the pie could reach?

Max Height:		