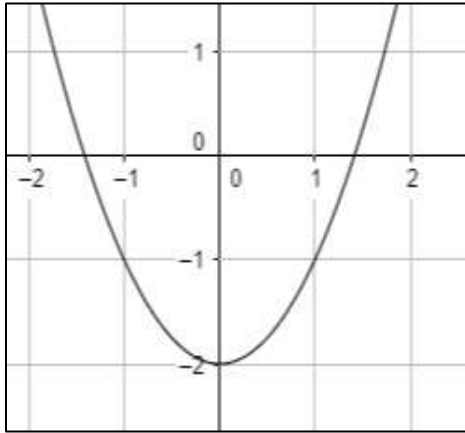
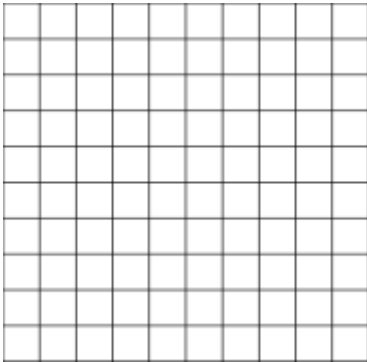


## Unit 9 – Quadratic Functions & Their Properties Test

1. Identify the vertex of the graph. Also, tell whether the vertex is a minimum or a maximum.



2. Graph the quadratic function  $y = x^2 - 1$ .



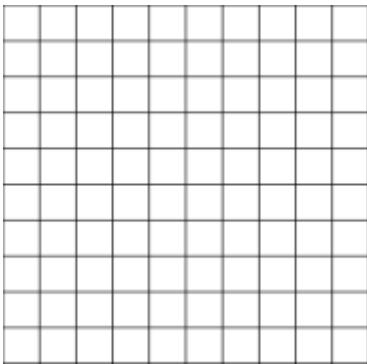
3. Identify the domain and range of the function  $y = 10x^2 + 0.5$ .

## Unit 9 – Quadratic Functions & Their Properties Test

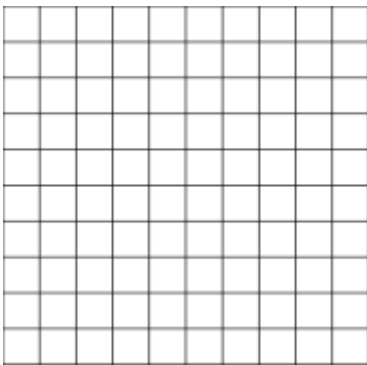
4. Identify the axis of symmetry and vertex of the graph of the quadratic function  $f(x) = x^2 - 8$ .

5. Graph the function using the vertex and axis of symmetry.

$$f(x) = -\frac{1}{2}x^2 + 8x - 2$$



6. Find the solution of the equation  $x^2 - 15 = -15$  by graphing the related function or mention if the equation has no solution.



## Unit 9 – Quadratic Functions & Their Properties Test

7. Find the solution of the equation  $2g^2 - 16 = -16$  by finding the square roots or mention if the equation has no solution.

8. Solve the equation  $(8t + 4)(3t + 6) = 0$

9. Solve the equation  $s^2 + 9s = -20$  by factoring.

## Unit 9 – Quadratic Functions & Their Properties Test

10. Find the value of  $c$  which will make the expression a perfect-square trinomial.

$$p^2 - 10p + c$$

11. Solve the equation by completing the square.

$$x^2 + 8x - 9 = 0$$

12. Evaluate the discriminant of the equation and tell how many solutions the equation has and are the solutions real or imaginary.

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

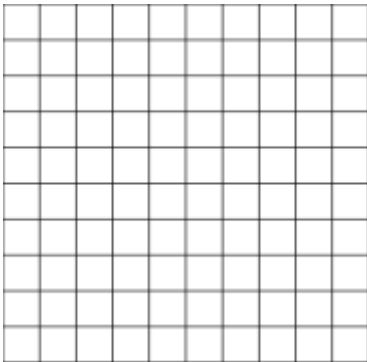
## Unit 9 – Quadratic Functions & Their Properties Test

13. Solve the quadratic equation using the quadratic formula.

$$x^2 = 3x + 2$$

14. Graph the set of points and determine which model best represents the data set.

(0,3), (1,1), (2,0), (3,1)



15. The graph of the equation  $y = e^x$  is a/an:

- a. Straight line
- b. U-shaped curve
- c. Increasing curve
- d. None of these