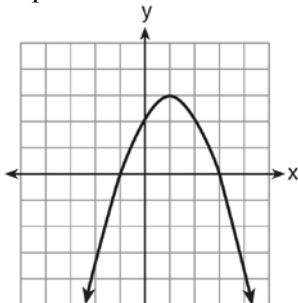
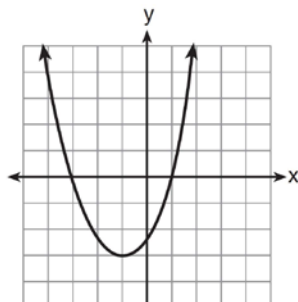


**A.G.10: Identifying the Vertex of a Quadratic Given Graph 1: Determine the vertex and axis of symmetry of a parabola, given its graph**

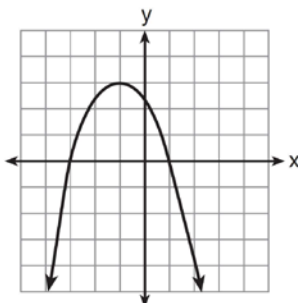
- 1 Which parabola has an axis of symmetry of  $x = 1$ ?



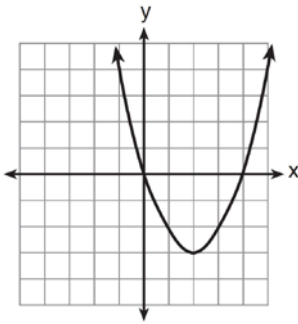
1)



2)

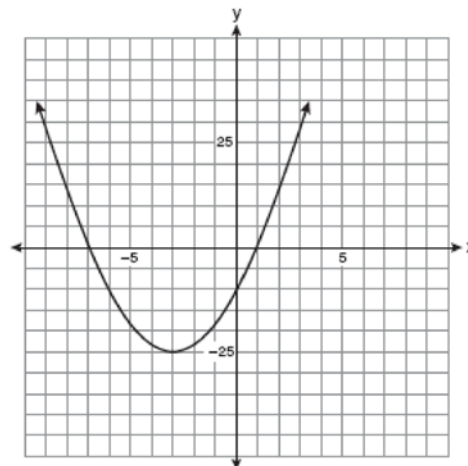


3)



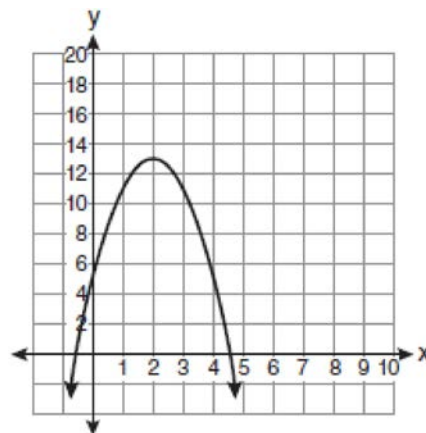
4)

- 2 Which equation represents the axis of symmetry of the graph of the parabola below?



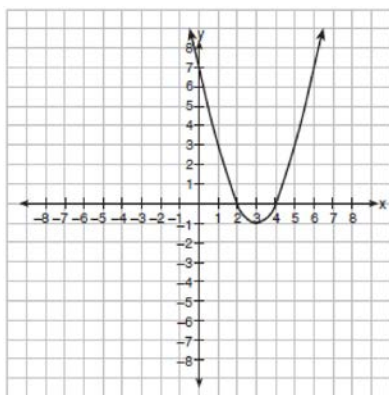
- 1)  $y = -3$
- 2)  $x = -3$
- 3)  $y = -25$
- 4)  $x = -25$

- 3 What is the equation of the axis of symmetry of the parabola shown in the diagram below?

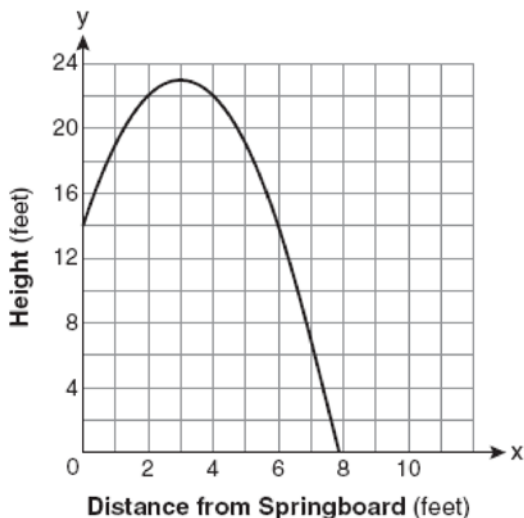


- 1)  $x = -0.5$
- 2)  $x = 2$
- 3)  $x = 4.5$
- 4)  $x = 13$

- 4 Which is an equation of the line of symmetry for the parabola in the accompanying diagram?



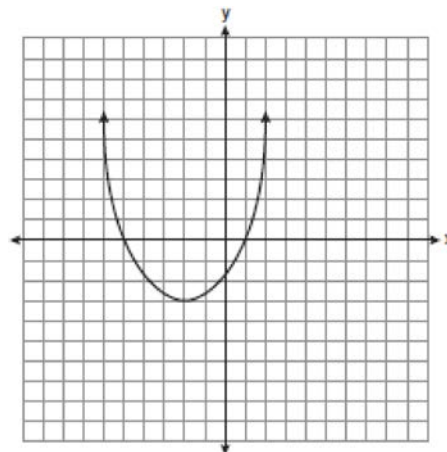
- 1)  $x = 2$
  - 2)  $x = 4$
  - 3)  $x = 3$
  - 4)  $y = 3$
- 5 A swim team member performs a dive from a 14-foot-high springboard. The parabola below shows the path of her dive.



Which equation represents the axis of symmetry?

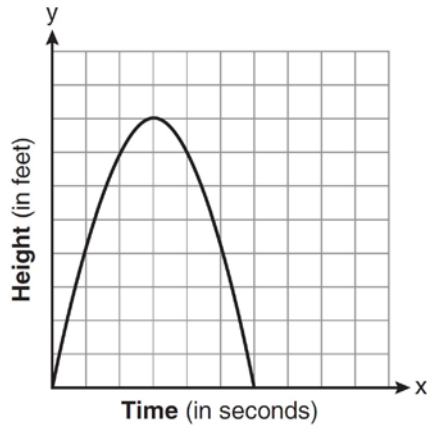
- 1)  $x = 3$
- 2)  $y = 3$
- 3)  $x = 23$
- 4)  $y = 23$

- 6 What are the vertex and the axis of symmetry of the parabola shown in the diagram below?



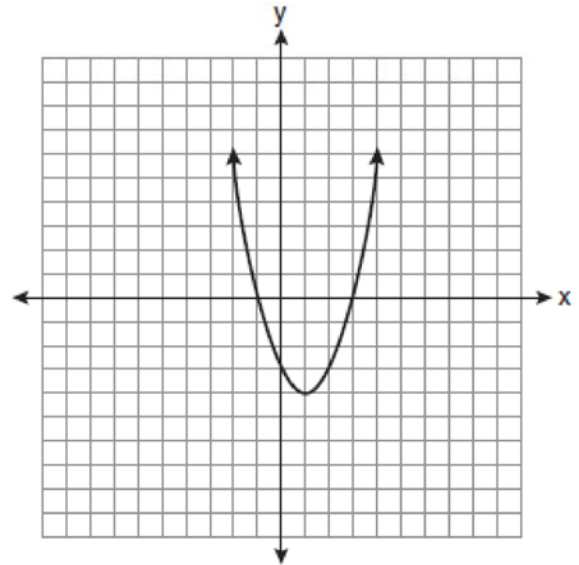
- 1) The vertex is  $(-2, -3)$ , and the axis of symmetry is  $x = -2$ .
- 2) The vertex is  $(-2, -3)$ , and the axis of symmetry is  $y = -2$ .
- 3) The vertex is  $(-3, -2)$ , and the axis of symmetry is  $y = -2$ .
- 4) The vertex is  $(-3, -2)$ , and the axis of symmetry is  $x = -2$ .

- 7 The graph below represents the parabolic path of a ball kicked by a young child. What are the vertex and the axis of symmetry for the parabola?



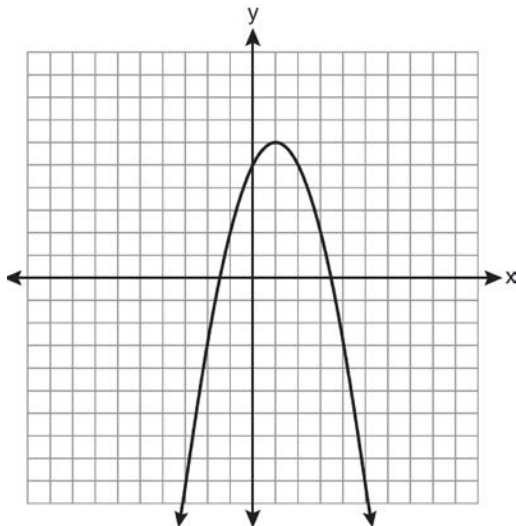
- 1) vertex:  $(3, 8)$ ; axis of symmetry:  $x = 3$
- 2) vertex:  $(3, 8)$ ; axis of symmetry:  $y = 3$
- 3) vertex:  $(8, 3)$ ; axis of symmetry:  $x = 3$
- 4) vertex:  $(8, 3)$ ; axis of symmetry:  $y = 3$

- 8 What are the vertex and axis of symmetry of the parabola shown in the diagram below?



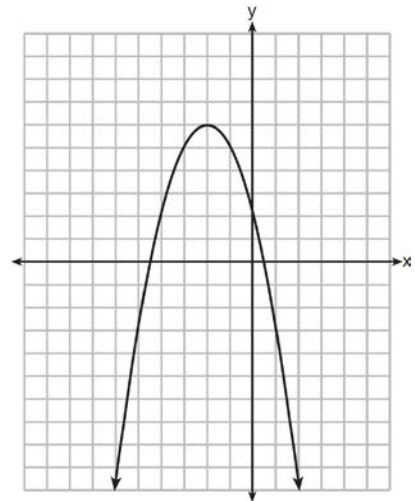
- 1) vertex:  $(1, -4)$ ; axis of symmetry:  $x = 1$
- 2) vertex:  $(1, -4)$ ; axis of symmetry:  $x = -4$
- 3) vertex:  $(-4, 1)$ ; axis of symmetry:  $x = 1$
- 4) vertex:  $(-4, 1)$ ; axis of symmetry:  $x = -4$

- 9 What are the vertex and the axis of symmetry of the parabola shown in the graph below?



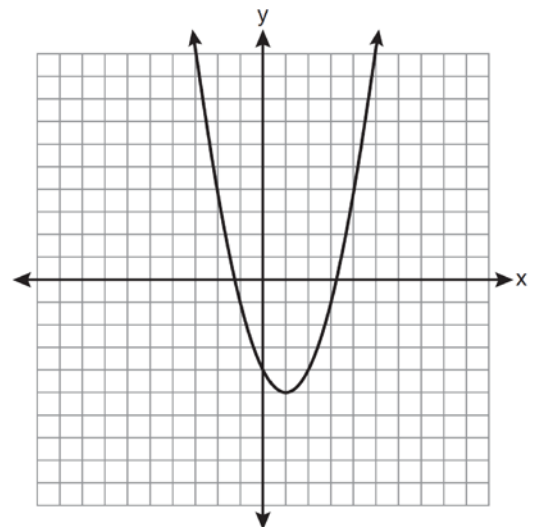
- 1) vertex: (1, 6); axis of symmetry:  $y = 1$
- 2) vertex: (1, 6); axis of symmetry:  $x = 1$
- 3) vertex: (6, 1); axis of symmetry:  $y = 1$
- 4) vertex: (6, 1); axis of symmetry:  $x = 1$

- 10 What are the coordinates of the vertex and the equation of the axis of symmetry of the parabola shown in the graph below?



- 1) (0, 2) and  $y = 2$
- 2) (0, 2) and  $x = 2$
- 3) (-2, 6) and  $y = -2$
- 4) (-2, 6) and  $x = -2$

- 11 State the equation of the axis of symmetry and the coordinates of the vertex of the parabola graphed below.



**A.G.10: Identifying the Vertex of a Quadratic Given Graph 1: Determine the vertex and axis of symmetry of a parabola, given its graph**  
**Answer Section**

- |    |                  |               |
|----|------------------|---------------|
| 1  | ANS: 1           | REF: 061420ia |
| 2  | ANS: 2           | REF: 010916ia |
| 3  | ANS: 2           | REF: 011015ia |
| 4  | ANS: 3           | REF: 010606a  |
| 5  | ANS: 1           | REF: 080813ia |
| 6  | ANS: 1           | REF: 060811ia |
| 7  | ANS: 1           | REF: 081405ia |
| 8  | ANS: 1           | REF: 061005ia |
| 9  | ANS: 2           | REF: 081111ia |
| 10 | ANS: 4           | REF: 081214ia |
| 11 | ANS:             |               |
|    | $x = 1; (1, -5)$ |               |

REF: 061133ia