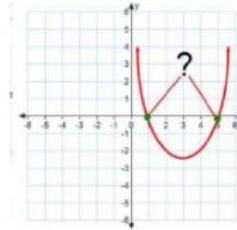


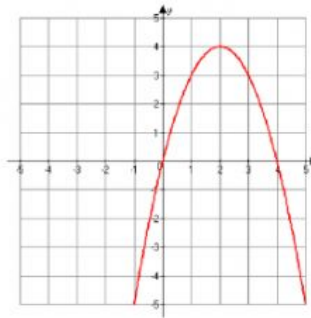
Multiple Choice. Read each statement carefully and select the letter of the correct answer. Be sure that you have not missed any items before clicking the 'Submit' button.

- What is the axis of symmetry?
  - the slope of the graph
  - the dividing line for a parabola
  - a way to spin my pencil
  - the x-axis
- What do you call a "U" shaped curve graph of a quadratic function?
  - parable
  - parabola
  - Cartesian plane
  - radical
- What are the green dots called?
  - axis of symmetry
  - parabola
  - vertex
  - roots/ x-intercepts



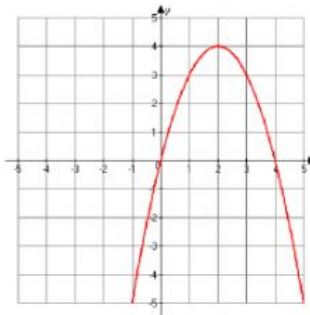
- Solve the inequality  $4x^2 - 20x + 24 < 0$ 
  - $x < -3$  or  $x > -2$
  - $2 < x < 3$
  - $x < 2$  or  $x > 3$
  - $-3 < x < -2$
- What is the discriminant of a quadratic equation  $ax^2 + bx + c = 0$ ?
  - $\frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$
  - $\sqrt{b^2 - 4ac}$
  - $b^2 - 4ac$
  - $b^2 + 4ac$
- Which of these equations has two real roots?
  - $x^2 - 4x + 4 = 0$
  - $x^2 - x + 5 = 0$
  - $x^2 - 10x + 100 = 0$
  - $x^2 - 4x + 3 = 0$
- If a quadratic equation has no real roots, what would be the value of the discriminant?
  - 3
  - 0
  - 1
  - 3
- Solve the quadratic equation by quadratic formula:  $x^2 + x - 2 = 0$ 
  - 4, -5
  - 2, -4
  - 2, -1
  - 1, -2
- Solve the quadratic equation by completing the square:  $x^2 + 10x + 22 = 0$ 
  - $5 \pm 2\sqrt{7}$
  - $-5 \pm \sqrt{3}$
  - $100 \pm \sqrt{3}$
  - $-10 \pm 2\sqrt{7}$
- How many solutions does the quadratic equation have?
  - 0
  - 1
  - 2
  - 3
- Which answer describes the function  $y = -3x^2 + 7x - 2$  accurately?
  - opens up with a minimum
  - opens down with a maximum
  - opens up with maximum
  - opens down with a minimum
- What are the x-intercepts?

- A. 0 and 2
- B. 2 and 3
- C. -4 and 0
- D. 0 and 4



13. Identify the vertex and the y-intercept of the graph of the function  $y = 2(x + 2)^2 - 2$ .
- |  |                                       |
|--|---------------------------------------|
| A. vertex: (2, 2);<br>y-intercept: 8   | C. vertex: (2, -2);<br>y-intercept: 6 |
| B. vertex: (-2, -2);<br>y-intercept: 6 | D. vertex: (-2, 2);<br>y-intercept: 2 |

14. Does this graph have a maximum or minimum value?
- A. maximum
  - B. minimum
  - C. neither
  - D. both



15. What is the y-intercept of  $(x) = 2x^2 + 4x + 6$  ?
- |            |            |
|------------|------------|
| A. (6, 0)  | C. (-6, 0) |
| B. (0, -6) | D. (0, 6)  |