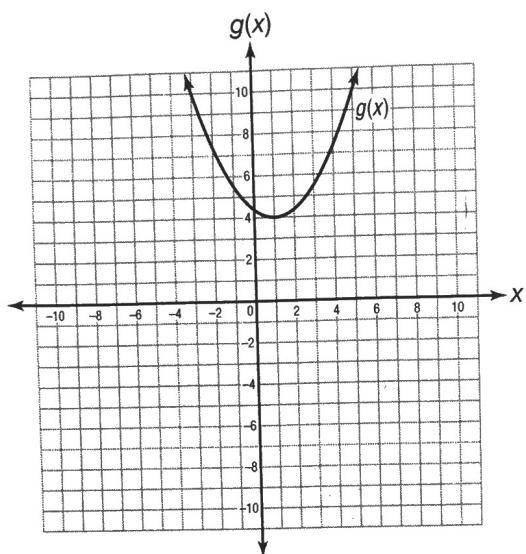


13. The graph below shows the function $g(x)$.



Which of the following describes how the graph of $g(2x)$ compares to the graph of $g(x)$?

- A. The axis of symmetry moves to the left $\frac{1}{2}$ unit, and the parabola is narrower.
- B. The axis of symmetry moves to the right $\frac{1}{2}$ unit, and the parabola is wider.
- C. The parabola is the same shape, but the axis of symmetry is moved to the left two units.
- D. The parabola is the same shape, but the axis of symmetry is moved to the right two units.

14. Which represents the solution set of the following equation?

$$5x^2 + 5x = -1$$

- A. $x = 0, 2$
- B. $x = -\frac{1}{2} + \frac{\sqrt{5}}{10}, -\frac{1}{2} - \frac{\sqrt{5}}{10}$
- C. $x = \frac{1}{5}, -\frac{1}{5}$
- D. $x = -\frac{1}{2} + \sqrt{5}, -\frac{1}{2} - \sqrt{5}$

15. Which represents the factored form of the polynomial below?

$$x^4 - 16$$

- A. $(x^2 - 4)(x^2 - 4)$
- B. $(x - 2)^2(x + 2)^2$
- C. $(x - 2)^2(x^2 + 2)$
- D. $(x - 2)(x + 2)(x^2 + 4)$

16. Toshi has a rectangular poster with side lengths of 3 feet and 4 feet. He wants to add a border of width x all around the poster. If the total area of the poster with the border must be less than 20 square feet, which of the following is the solution set of the border width, in feet?

- A. $(0, \frac{1}{2})$
- B. $(0, \frac{1}{2}]$
- C. $(0, 1)$
- D. $(0, 1]$

17. For what values of x will the graph of the following function cross the x -axis?

$$f(x) = 4x^2 + 20x + 16$$

- A. $(1, 4)$
- B. $(-1, 4)$
- C. $(-4, 1)$
- D. $(-4, -1)$