

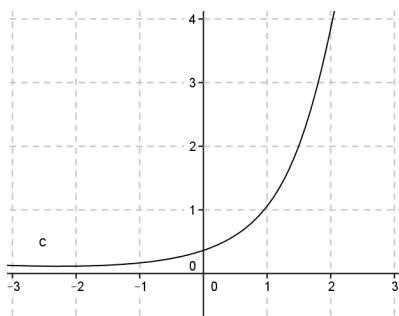


- Find the axis of symmetry and the vertex of the parabola: $g(x) = 4x^2 - 2x + 1$
 - axis of symmetry: $x = \frac{3}{4}$ vertex: $(\frac{3}{4}, \frac{1}{4})$
 - axis of symmetry: $x = \frac{2}{3}$ vertex: $(\frac{2}{3}, 1)$
 - axis of symmetry: $x = \frac{1}{4}$ vertex: $(\frac{1}{4}, \frac{3}{4})$
 - axis of symmetry: $x = 1$ vertex $(1, \frac{2}{3})$
- The table gives the number of candy pieces sold in a candy shop between 1980 and 1985. Determine which model best fits the data.

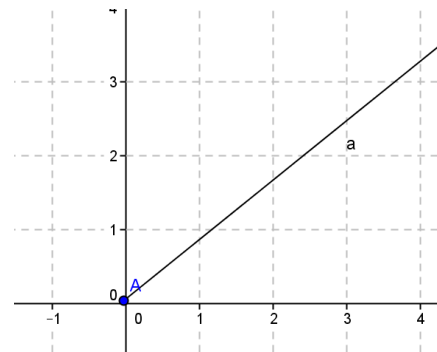
Year	1980	1981	1982	1983	1984	1985
Candy	100	150	250	400	600	850

- linear
 - absolute value
 - quadratic
 - exponential
- Determine which function the set of ordered pairs best represents.
 $\{(-2, 2), (-4, 4), (2, 2), (4, 4)\}$
 - linear
 - absolute value
 - exponential
 - quadratic
 - A salesperson earns a monthly salary of \$400 a month plus a percentage of the proceeds from the number of items he sells. Which graph would model this situation.

a.



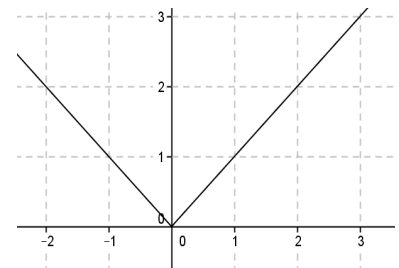
b.





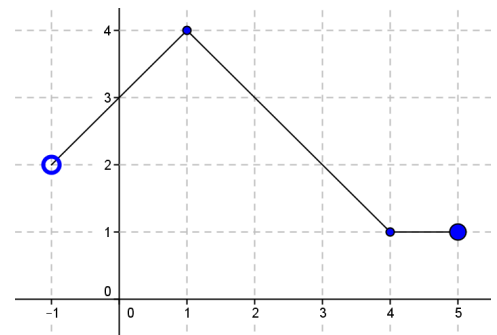
5. What is the range of the function $m(x) = -3x^2 + 4x + 3$ with a domain of $-1 \leq x \leq 1$
- $-1 \leq y \leq 1$
 - $-5 \leq y \leq 5$
 - $-4 \leq y \leq 4$
 - $-2 \leq y \leq 2$
6. A football is thrown straight up, with an initial velocity of thirty meters per second and from an initial height of 3 meters. The function $h(t) = 3 + 30t - 4.9t^2$ describes the height as a function of time. What is the average speed of the football during the first two seconds of flight?
- 7.65 m/s
 - 15.3 m/s
 - 20.2 m/s

7. What type of function is depicted in the following graph?
- absolute value function
 - step function
 - piecewise function



8. Which function has the highest range with a domain of 3?
- $f(x) = 2x - 4$
 - $g(x) = 2(0.5)^x$
 - $h(x) = 3x^2 - 4x + 9$

9. What is the domain of the function shown in the graph?
- $1 \leq x \leq 4$
 - $-1 \leq x \leq 5$
 - $-1 < x \leq 5$

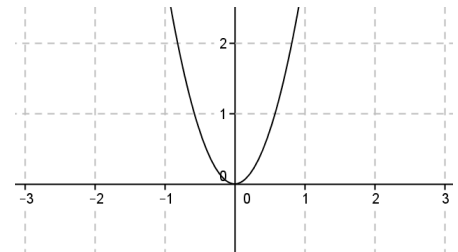


10. Find the inverse of $g(x) = 3x + 2$
- $g^{-1}(x) = \frac{1}{3}x + \frac{2}{3}$
 - $g^{-1}(x) = \frac{1}{3}x - \frac{2}{3}$
 - $g^{-1}(x) = -\frac{2}{3}$



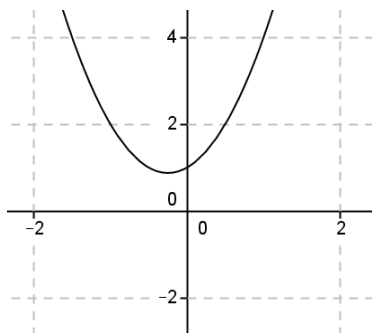
11. How would you change the graph of $f(x) = x^2$ to produce the graph of $g(x) = x^2 - 4$
- shifts the graph $f(x)$ down 4 units
 - shifts the graph $f(x)$ up 4 units
 - shifts the graph $f(x)$ left 4 units
 - reflects the graph of $f(x)$

12. What transformation changes the graph of $f(x) = x^2$ to the graph shown?
- horizontal translation
 - vertical translation
 - Reflection
 - Stretch

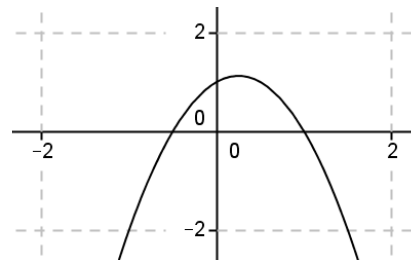


13. Graph: $f(x) = -2x^2 + x + 1$

a.

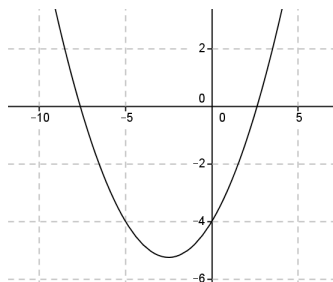


b.



14. Graph $g(x) = 0.2x^2 + x - 4$

a.



b.

