

# ch 1 form A

Name: \_\_\_\_\_ Class: \_\_\_\_\_ Date: \_\_\_\_\_

## Chapter 1

- \_\_\_\_\_ 1. Find the slope of the line through  $P(5,7)$  and  $Q(-1,7)$ .
- A)  $m = 3$
  - B)  $m = -5$
  - C)  $m = 6$
  - D)  $m = 0$
  - E)  $m = 1$
- \_\_\_\_\_ 2. Find the slope of the line through  $P(-9,1)$  and  $Q(-3,-11)$ .
- A)  $m = -1$
  - B)  $m = -2$
  - C)  $m = -4$
  - D)  $m = -3$
  - E)  $m = 0$
- \_\_\_\_\_ 3. Find the slope of the line passing through the pair of points:
- $P(-1,-18); Q(13,16)$
- A)  $m = \frac{17}{7}$
  - B)  $m = -\frac{7}{17}$
  - C)  $m = -\frac{17}{7}$
  - D)  $m = \frac{7}{17}$
  - E) none of these
- \_\_\_\_\_ 4. Find the slope of the line passing through the pair of points.
- $P(5, \sqrt{18}); Q(\sqrt{18}, 5)$
- A)  $m = 5$
  - B)  $m = 1$
  - C)  $m = 2$
  - D)  $m = -1$
  - E) none of these
- \_\_\_\_\_ 5. Find the slope of the line.
- $y = 8x + 5$
- A)  $m = -8$

- B)  $m = 9$
- C)  $m = 12$
- D)  $m = 8$
- E)  $m = 5$

\_\_\_\_\_ 6. Find the y-intercept of the line determined by the equation.

$$-7x + 5y = 3$$

- A)  $(0, \frac{7}{5})$
- B)  $(0, \frac{3}{5})$
- C)  $(0, -\frac{3}{5})$
- D)  $(-\frac{7}{5}, 0)$
- E)  $(0, -\frac{7}{5})$

\_\_\_\_\_ 7. Write the equation of the line that passes through the point  $P(0,0)$  and is parallel to the line  $y = 2x - 4$ .

- A)  $x = 2y$
- B)  $y = 4x + 2$
- C)  $y = -4x$
- D)  $y = 2x$
- E)  $y = 4x$

\_\_\_\_\_ 8. Write the equation of the line that passes through the point  $P(0,0)$  and is perpendicular to the line  $y = -4x + 5$ .

- A)  $y = \frac{1}{4}x$
- B)  $y = -\frac{1}{5}x$
- C)  $y = -5x$
- D)  $y = 4x$
- E)  $y = -\frac{1}{4}x + 5$

\_\_\_\_\_ 9. Write the equation of the line that passes through the point  $P(3, 4)$  and is perpendicular to the line  $y = -5x + 8$ .

- A)  $y = \frac{1}{5}x + 8$
- B)  $y = \frac{1}{5}x + 4.6$
- C)  $y = \frac{1}{5}x + 3.4$

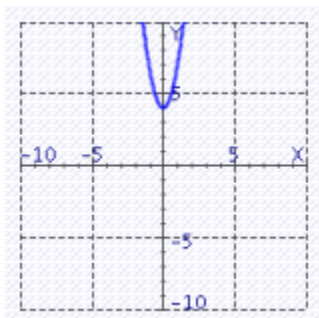
D)  $x = 3.4y + \frac{1}{5}$

E)  $y = x + 3.4$

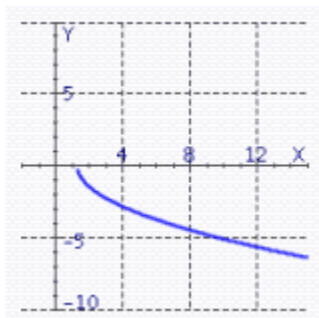
\_\_\_\_ 10. Find the graph of the equation.

$$f(x) = \sqrt{3x - 4}$$

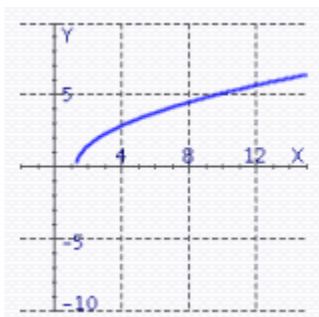
A)



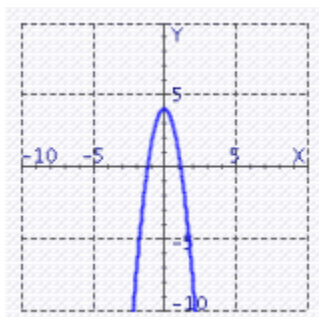
C)



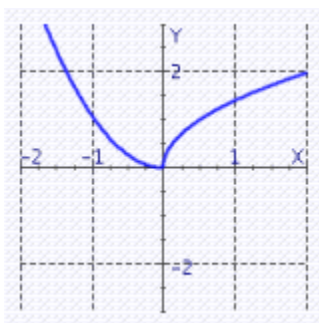
B)



D)



\_\_\_\_ 11. Tell where the function is decreasing.



A)  $(0, \infty)$

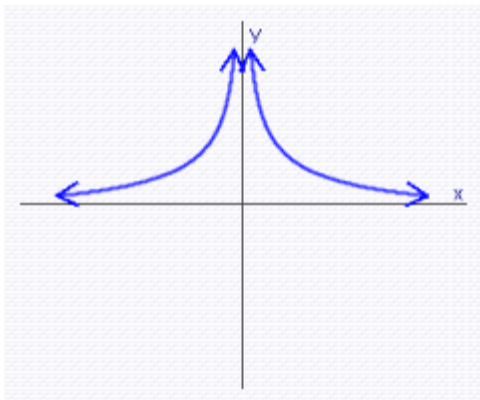
B)  $(-\infty, 0)$

C) always increasing

D) always constant

E) always decreasing

\_\_\_\_\_ 12. Tell where the function is decreasing.

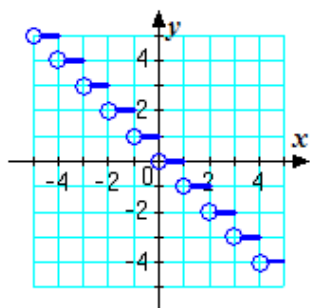


- A) always increasing
- B) always decreasing
- C)  $(0, \infty)$
- D) always constant
- E)  $(-\infty, 0)$

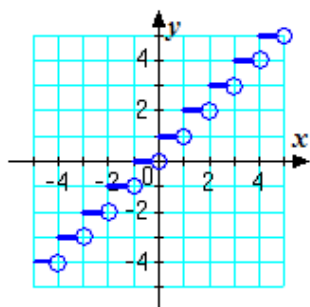
13. Which graph represents the function?

$$g(x) = \llbracket x - 1 \rrbracket$$

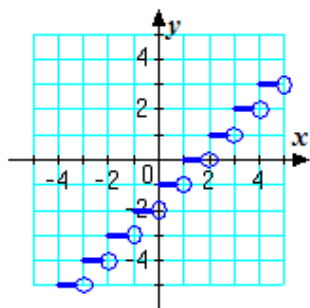
A)



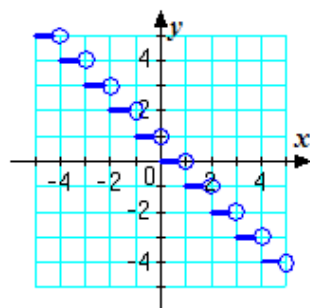
B)



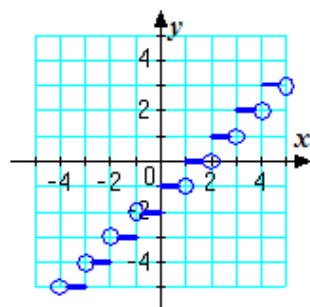
C)



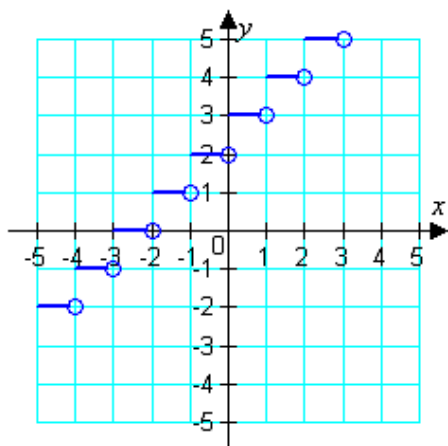
D)



E)



14. Which function does the graph represent?



A)  $g(x) = \lfloor x - 3 \rfloor$

B)  $g(x) = \lfloor x + 3 \rfloor$

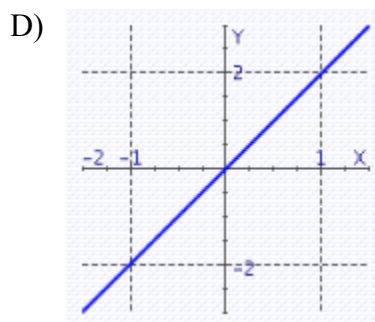
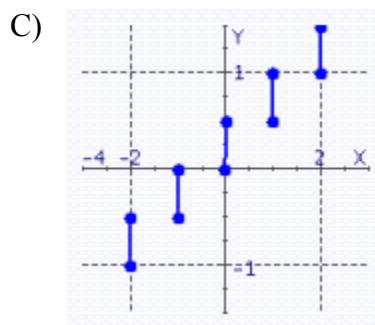
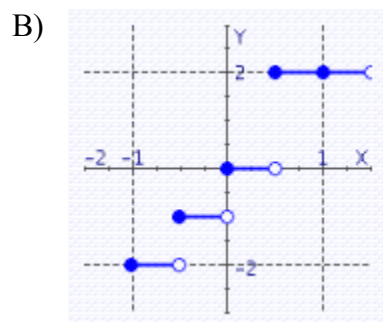
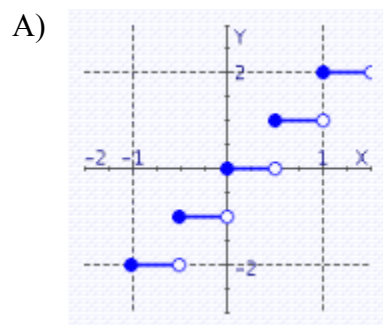
C)  $g(x) = \left\lfloor \frac{x}{3} \right\rfloor$

D)  $g(x) = \lfloor 3x \rfloor$

E)  $g(x) = 3\lfloor x \rfloor$

15. Graph the function.

$$y = \lfloor 2x \rfloor$$



- \_\_\_\_\_ 16. Find the distance between the two points  $(10, -8)$  and  $(10, 5)$ .
- A) 26
  - B) 18
  - C) 13
  - D) 34
  - E) 5

- \_\_\_\_\_ 17. Let  $f(x) = 2x + 1$ ,  $g(x) = 3x - 2$ . Find the function.

$$(f - g)(x)$$

- A)  $(f - g)(x) = \frac{2x + 1}{3x - 2}$
- B)  $(f - g)(x) = 3 - x$
- C)  $(f - g)(x) = 6x^2 - x - 2$
- D)  $(f - g)(x) = 5x - 1$
- E) none of the above

- \_\_\_\_\_ 18. Let  $f(x) = 2x - 1$ ,  $g(x) = 3x - 2$ . Find the domain of the function.

$$(f + g)(x)$$

- A)  $(-\infty, \infty)$
- B)  $[0, \infty)$
- C)  $(-\infty, 0]$
- D)  $(-\infty, 0)$
- E)  $(0, \infty)$

- \_\_\_\_\_ 19. Let  $f(x) = \frac{1}{x}$ ,  $g(x) = x + 5$ . Find the composite function which expresses the given correspondence correctly.

$$\frac{1}{x + 5}$$

- A)  $(g \circ g)(x)$
- B)  $(g \circ f)(x)$
- C)  $(f \circ f)(x)$
- D)  $(f \circ g)(x)$
- E) none of the above

- \_\_\_\_\_ 20. Determine whether the function is one-to-one.

$$y = 3x$$

- A) No, it isn't one-to-one.
- B) Yes, it is one-to-one.



\_\_\_\_\_ 21. Find the inverse of the one-to-one function.

$$y = 5x + 8$$

A)  $y = \frac{x + 8}{5}$

B)  $y = \frac{x - 8}{5}$

C)  $y = \frac{5}{x - 8}$

D)  $y = \frac{x - 5}{8}$

E) none of the above

\_\_\_\_\_ 22. Find the inverse of the one-to-one function.

$$y = 9x$$

A)  $y = 9x^2$

B)  $y = 9x$

C)  $y = \frac{x}{9}$

D)  $y = \frac{9}{x}$

E)  $y = 81x$

\_\_\_\_\_ 23. The function  $f(x) = x^2 - 3$  is one-to-one on the domain  $(x \leq 0)$ . Find  $f^{-1}(x)$ .

A)  $f^{-1}(x) = -\sqrt{x + 3}$

B)  $f^{-1}(x) = \frac{1}{x^2 - 3}$

C)  $f^{-1}(x) = \sqrt{x + 3}$

D)  $f^{-1}(x) = \sqrt{x - 3}$

E)  $f^{-1}(x) = x^2 + 3$

\_\_\_\_\_ 24. Find the inverse of the one-to-one function.

$$y = \frac{1}{9x}$$

A)  $y = \frac{9}{x}$

B)  $y = \frac{x}{9}$

C)  $y = 9x$

D)  $y = \frac{1}{9x}$

E) inverse does not exist

\_\_\_\_\_ 25. Which equation does not represent  $y$  as a function of  $x$ ?

A)  $x = -6y + 5$

B)  $x = -1$

C)  $y = 7x + 9$

D)  $y = \left| -8 + 9x^2 \right|$

E)  $y = \sqrt{8+x}$

## Chapter 1

### Answer Section

- |            |        |
|------------|--------|
| 1. ANS: D  | PTS: 1 |
| 2. ANS: B  | PTS: 1 |
| 3. ANS: A  | PTS: 1 |
| 4. ANS: D  | PTS: 1 |
| 5. ANS: D  | PTS: 1 |
| 6. ANS: B  | PTS: 1 |
| 7. ANS: D  | PTS: 1 |
| 8. ANS: A  | PTS: 1 |
| 9. ANS: C  | PTS: 1 |
| 10. ANS: B | PTS: 1 |
| 11. ANS: B | PTS: 1 |
| 12. ANS: E | PTS: 1 |
| 13. ANS: C | PTS: 1 |
| 14. ANS: B | PTS: 1 |
| 15. ANS: A | PTS: 1 |
| 16. ANS: C | PTS: 1 |
| 17. ANS: B | PTS: 1 |
| 18. ANS: A | PTS: 1 |
| 19. ANS: D | PTS: 1 |
| 20. ANS: B | PTS: 1 |
| 21. ANS: B | PTS: 1 |
| 22. ANS: C | PTS: 1 |
| 23. ANS: A | PTS: 1 |
| 24. ANS: D | PTS: 1 |
| 25. ANS: B | PTS: 1 |