

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) $y = -\frac{1}{4}x + 5$

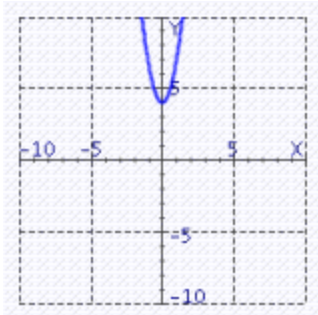
- _____ 9. Write the equation of the line that passes through the point $P(3, 4)$ and is perpendicular to the line $y = -5x + 8$.

- 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) $y = x + 3.4$

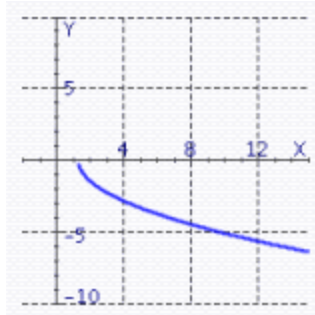
10. Find the graph of the equation.

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

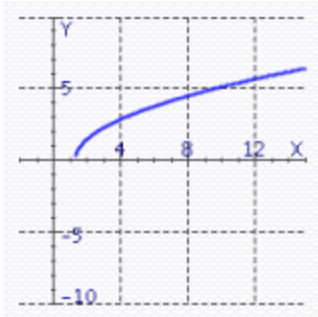
A)



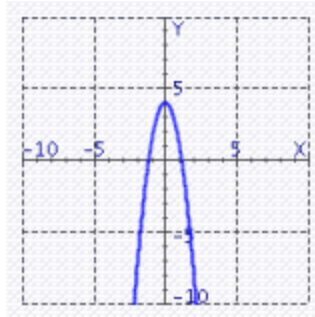
C)



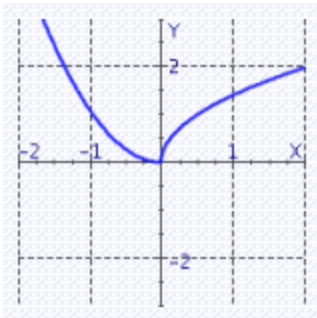
B)



D)



11. Tell where the function is decreasing.



A) $(0, \infty)$

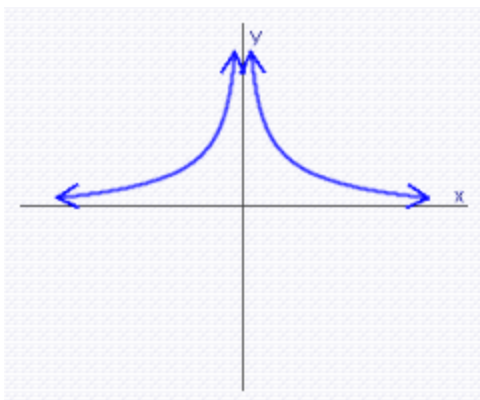
B) $(-\infty, 0)$

C) always increasing

D) always constant

E) always decreasing

12. Tell where the function is decreasing.

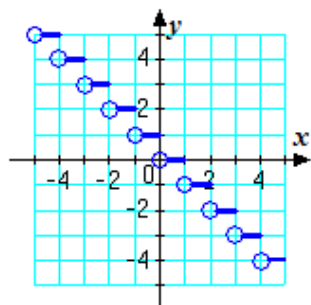


- A) always increasing
- B) always decreasing
- C) $(0, \infty)$
- D) always constant
- E) $(-\infty, 0)$

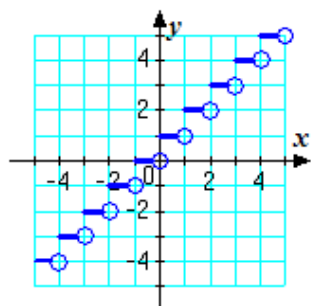
13. Which graph represents the function?

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

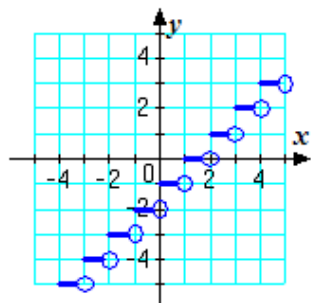
A)



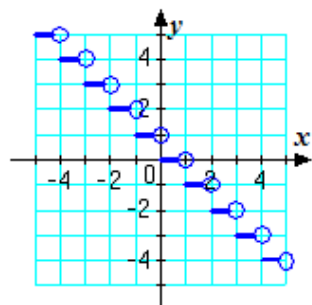
B)



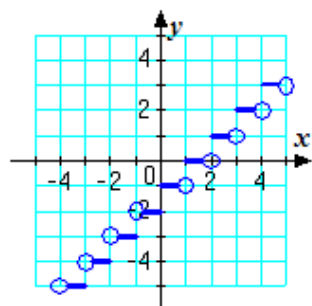
C)



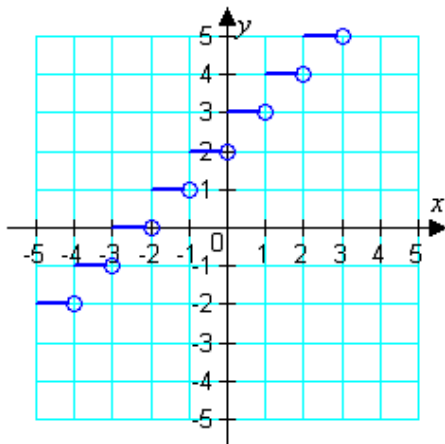
D)



E)



14. Which function does the graph represent?



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

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

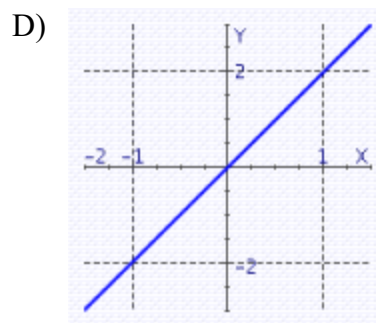
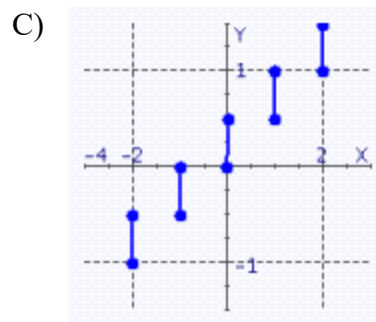
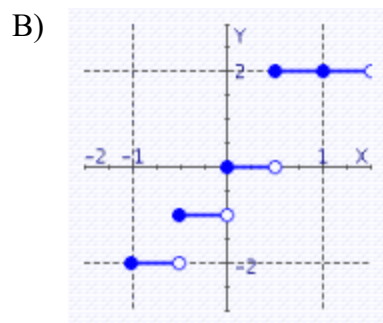
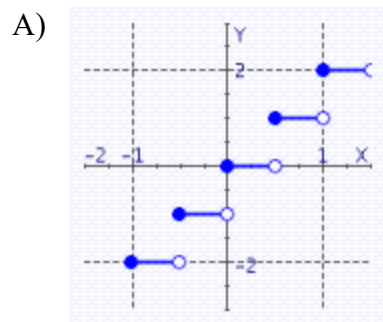
C) $g(x) = \left\lfloor \frac{x}{3} \right\rfloor$

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