

Chapter 2 Test, Form 1

SCORE _____

Write the letter for the correct answer in the blank at the right of each question.

1. Find the domain of the relation $\{(0, 0), (1, 1), (2, 0)\}$. Then determine whether the relation is a function.

A $\{0, 1, 0\}$; function
 B $\{0, 1, 0\}$; not a function
 C $\{0, 1, 2\}$; function
 D $\{0, 1, 2\}$; not a function

1. _____

2. The table shows the annualized percent return of a mutual fund for several years. Find the range of the relation. Then determine whether the relation is a function.

Year	1	3	5	10
Percent Return	20.9	22.8	20.0	20.5

F $\{20.9, 22.8, 20.0, 20.5\}$; not a function
 G $\{20.9, 22.8, 20.0, 20.5\}$; function
 H $\{1, 3, 5, 10\}$; not a function
 J $\{1, 3, 5, 10\}$; function

2. _____

3. Find $f(-1)$ if $f(x) = -3x - 5$.

A -9
 B -8
 C -2
 D 2

3. _____

4. Find $f(0)$ if $f(t) = t^2 - 2t - 2$.

F 2
 G -4
 H 0
 J -2

4. _____

5. Which equation is linear?

A $xy = 60$
 B $3x - 2y = 5$
 C $y = x^2 - 3x + 1$
 D $y^2 + 1 = x$

5. _____

6. Which function is a linear function?

F $f(x) = x^3 + x$
 G $h(t) = 2t + \frac{1}{t}$
 H $g(s) = 1 - 4s$
 J $f(r) = \sqrt{r}$

6. _____

7. Write $y - 4x = 7$ in standard form.

A $4x - y = -7$
 B $4x + y = 7$
 C $y = 4x + 7$
 D $4x = y - 7$

7. _____

8. Find the x -intercept of the graph of $-5x + 10y = 20$.

F -2
 G 2
 H 4
 J -4

8. _____

9. Find the slope of the line that passes through $(0, 2)$ and $(8, 8)$.

A 8
 B $\frac{4}{3}$
 C $\frac{3}{4}$
 D $\frac{5}{4}$

9. _____

10. If a line rises to the right, its slope is _____?

F zero
 G positive
 H negative
 J undefined

10. _____

11. What is the slope of a line that is perpendicular to the graph of $y = 2x + 5$?

A $-\frac{1}{2}$
 B $\frac{1}{2}$
 C 2
 D -2

11. _____

12. Line a through $(2, 3)$ is parallel to line b with equation $y = -1$. Which point below also lies on line a ?

F $(2, 9)$
 G $(-5, 3)$
 H $(0, 1)$
 J $(1, 4)$

12. _____

Chapter 2 Test, Form 1 *(continued)*

13. Write an equation in slope-intercept form for the line that has a slope of $-\frac{4}{5}$ and passes through $(0, 7)$.

- A $y = 7x$ B $y = 7x - \frac{4}{5}$ C $y = \frac{4}{5}x + 7$ D $y = -\frac{4}{5}x + 7$

13. _____

14. Write an equation in slope-intercept form for the line that passes through $(0, 1)$ and is perpendicular to the line whose equation is $y = 2x$.

- F $y = -2x + 1$ G $y = 2x + 1$ H $y = \frac{1}{2}x + 1$ J $y = -\frac{1}{2}x + 1$

14. _____

15. Use a scatter plot to draw a line of fit and then describe the correlation.

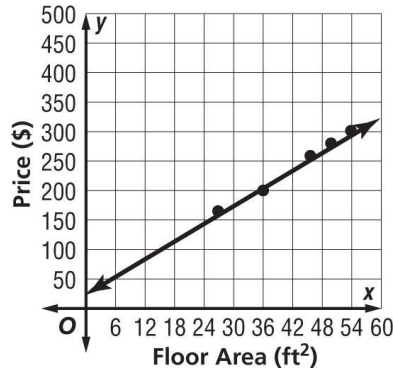
- A positive C no correlation
B negative D random correlation

x	0	1	2	5	8
y	2	3	10	12	16

15. _____

16. The scatter plot shows the area of the floor and the price for certain tents. Which equation could be a prediction equation for this set of data?

- F $y = x + 50$ H $y = 10x + 25$
G $y = 5x - 50$ J $y = 5x + 22$



16. _____

17. A banquet hall has tables that can seat 8 people. The number of tables needed depends on the number of guests. What type of special function models this situation?

- A linear function C absolute value function
B step function D constant function

17. _____

18. Identify the range of $y = |x|$.

- F all real numbers H $\{x \mid x \geq 0\}$
G $\{y \mid y \geq 0\}$ J $\{y \mid y \leq 0\}$

18. _____

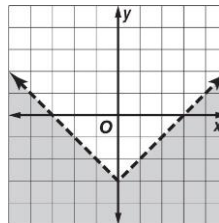
19. The graph of the linear inequality $y \geq 2x - 1$ is the region _____ the graph of the line $y = 2x - 1$.

- A on or above B on or below C above D below

19. _____

20. Which inequality is graphed at the right?

- F $y \geq |x| - 3$ H $y \leq |x| - 3$
G $y > |x| - 3$ J $y < |x| - 3$



20. _____

Bonus Find the value of k so that the slope of the line through $(4, 2)$ and $(k, 3)$ is $\frac{1}{6}$.

B: _____