

4 Chapter 4 Test, Form 1

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

For Questions 1–5, find the equation in slope-intercept form that describes each line.

1. a line with slope -2 and y -intercept 4

- A $y = -2x$ B $y = 4x - 2$ C $y = -2x + 4$ D $y = 2x - 4$ 1. _____

2. a line through $(2, 4)$ with slope 0

- F $y = 2$ G $x = 2$ H $y = 4$ J $x = 4$ 2. _____

3. a line through $(4, 2)$ with slope $\frac{1}{2}$

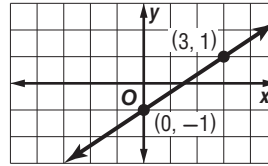
- A $y = -\frac{1}{2}x$ B $y = \frac{1}{2}x - 4$ C $y = 2x - 10$ D $y = \frac{1}{2}x$ 3. _____

4. a line through $(-1, 1)$ and $(2, 3)$

- F $y = \frac{2}{3}x + \frac{5}{3}$ G $y = -\frac{2}{3}x + \frac{5}{3}$ H $y = \frac{2}{3}x - \frac{5}{3}$ J $y = -\frac{2}{3}x - \frac{5}{3}$ 4. _____

5. the line graphed at the right

- A $y = \frac{2}{3}x - 1$ C $y = \frac{2}{3}x + \frac{3}{2}$
 B $y = \frac{3}{2}x - 1$ D $y = \frac{3}{2}x + \frac{3}{2}$



5. _____

6. If 5 deli sandwiches cost \$29.75, how much will 8 sandwiches cost?

- F \$37.75 G \$29.75 H \$47.60 J \$0.16 6. _____

7. What is the standard form of $y - 8 = 2(x + 3)$?

- A $2x + y = 14$ B $y = 2x + 14$ C $2x - y = -14$ D $y - 2x = 11$ 7. _____

8. Which is the graph of $3x - 4y = 6$?

- F G H J

8. _____

9. Which is the point-slope form of an equation for the line that passes through $(0, -5)$ with slope 2 ?

- A $y = 2x - 5$ B $y + 5 = 2x$ C $y - 5 = x - 2$ D $y = 2(x + 5)$ 9. _____

10. What is the slope-intercept form of $y + 6 = 2(x + 2)$?

- F $y = 2x - 6$ G $y = 2x - 2$ H $y = 2x + 6$ J $2x - y = 6$ 10. _____

11. When are two lines parallel?

- A when the slopes are opposite
 B when the slopes are equal
 C when the slopes are positive
 D when the product of the slopes is -1 11. _____

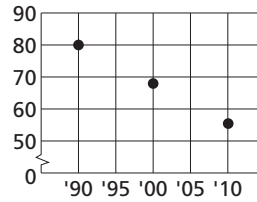
4 Chapter 4 Test, Form 1 *(continued)*

12. Find the slope-intercept form of an equation for the line that passes through $(-1, 2)$ and is parallel to $y = 2x - 3$.
F $y = 2x + 4$ **G** $y = 0.5x + 4$ **H** $y = 2x + 3$ **J** $y = -0.5x - 4$ 12. _____

13. Find the slope-intercept form of an equation of the line perpendicular to the graph of $x - 3y = 5$ and passing through $(0, 6)$.
A $y = \frac{1}{3}x - 2$ **B** $y = -3x + 6$ **C** $y = \frac{1}{3}x + 2$ **D** $y = 3x - 6$ 13. _____

For Questions 14 and 15, use the scatter plot shown.

14. How would you describe the relationship between the x - and y -values in the scatter plot?
F strong negative correlation
G weak negative correlation
H weak positive correlation
J strong positive correlation



15. Based on the data in the scatter plot, what would you expect the y -value to be for $x = 2020$?
A greater than 80 **C** between 65 and 50
B between 80 and 65 **D** less than 50 15. _____

16. Which equation has a slope of 2 and a y -intercept of -5 ?
F $y = -5x + 2$ **G** $y = 5x + 2$ **H** $y = 2x + 5$ **J** $y = 2x - 5$ 16. _____

17. Which correlation coefficient corresponds to the best-fit line that most closely models its set of data?
A 0.84 **B** 0.13 **C** -0.87 **D** -0.15 17. _____

18. The table below shows Mia's bowling score each week she participated in a bowling league.

Week	1	2	3	4	5	6
Score	122	131	130	133	145	139

Use the median-fit line to estimate Mia's score for week 16.

- F** 173 **G** 180 **H** 182 **J** 257 18. _____
19. If $f(x) = 6x + 3$, find $f^{-1}(x)$.
A $f^{-1}(x) = 6x - 3$ **B** $f^{-1}(x) = \frac{x-6}{3}$ **C** $f^{-1}(x) = \frac{x-3}{6}$ **D** $f^{-1}(x) = -3 - 6x$ 19. _____
20. If $f(x) = 4(3x - 5)$, find $f^{-1}(x)$.
F $f^{-1}(x) = \frac{x+5}{12}$ **G** $f^{-1}(x) = \frac{x+20}{12}$ **H** $f^{-1}(x) = \frac{x-20}{12}$ **J** $f^{-1}(x) = \frac{x+5}{4}$ 20. _____

Bonus Find the value of r in $(4, r), (r, 2)$ so that the slope of the line containing them is $-\frac{5}{3}$.
B: _____

Chapter 4 Assessment Answer Key

Vocabulary Test Page 54

- perpendicular lines
- inverse relation
- scatter plot
- parallel lines
- correlation coefficient
- linear interpolation
- linear extrapolation
- slope-intercept
- point-slope
Sample answer: A line of fit is a line that comes close to the data points for a scatter plot, even if all the data points do not lie on that line.
- Linear extrapolation is the process of using a linear equation to predict a y -value for an x -value that lies beyond the extremes of the domain of the relation.

Form 1 Page 55

- C
- H
- D
- F
- A
- H
- C
- H
- B
- G
- B

Page 56

- F
- B
- F
- D
- J
- C
- H
- C
- G
- B: 7