NAME Key DATE PERIOD

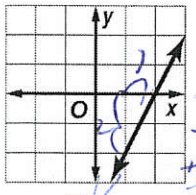
Chapter 4 Sample Test

SCORE

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

1. What is the slope-intercept form of the equation of the line with a slope of $\frac{1}{4}$ and y-intercept at the origin? 1. $y = \frac{1}{4}x$

2. Which equation is graphed at the right? 2. F
   F $y - 2x = -4$ **H** $2x + y = 4$
   G $2x + y = -4$ **J** $y - 4 = 2x$



3. What is an equation of the line that passes through (4, –5) and (6, –9)? 3. $y = -2x + 3$

4. What is the standard form of the equation of the line through (6, –3) with a slope of $\frac{2}{3}$? 4. $2x - 3y = 21$

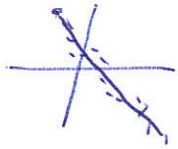
5. What is an equation of the line with a slope of -3 that passes through (2, 4)? 5. $y = -3x + 10$

6. What is the equation of the line through (-2, -3) with an undefined slope? 6. $x = -2$

7. Find the slope-intercept form of the equation of the line that passes through (–1, 5) and is parallel to $4x + 2y = 8$. 7. $y = -2x + 4$

8. If line q has a slope of –2, what is the slope of any line perpendicular to q? 8. $m = \frac{1}{2}$

9. The graph of data that has a strong negative correlation has 9. B
   A a narrow linear pattern from lower left to upper right.
   B a narrow linear pattern from upper left to lower right.
   C a narrow horizontal pattern below the x-axis.
   D all negative x-values.



10. A scatter plot of data comparing the time in minutes Beverly spends studying for her math test and the score she received on the test contains the ordered pairs (45, 89) and (60, 94). What is the slope-intercept form of an equation for the line of fit? 10. $y = \frac{1}{3}x + 74$

11. Using the equation made in problem 10, estimate how well Beverly would score on her next test if she spent 20 minutes studying. 11. about 93.

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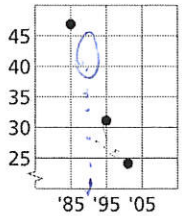
Chapter 4 Sample Test *(continued)*

For Questions 12-14, use the scatter plot shown.



12. Which data are shown by the scatter plot?
F (1985, 47), (1995, 31), (2001, 24)
G (1985, 50), (2000, 25), (2005, 0)
H (47, 1985), (31, 1995), (24, 2001)
J (1991, 45), (1995, 35), (2000, 8)

12. F

13. Based on the data in the scatter plot, which statement is true?
A As x increases, y increases.
B As x increases, y decreases.
C There is no relationship between x and y.
D There are not enough data to determine the relationship between x and y.

13. B

14. Based on the scatter plot, what would you expect the y-value to be for $x = 1992$?
F between 40 and 45 **H** between 30 and 40
G higher than 45 **J** impossible to tell

14. F

15. A baby blue whale weighed 3 tons at birth. Ten days later, it weighed 4 tons. Assuming the same rate of growth, which equation shows the weight w when the whale is d days old?
A $w = 10d + 3$ **B** $w = 10d + 4$ **C** $w = 0.1d + 3$ **D** $w = d + 10$

15. C

For Questions 16 and 17, use the table shown.

Times at Bat	4	5	8	12	22
Hits	1	0	2	4	6

16. What type of correlation does this table have, if any?

16. positive

17. Write an equation that will be best fit of the data shown.

17. $y = \frac{1}{3}x - \frac{5}{3}$

18. Find the inverse of $\{(2, -1), (5, -2), (6, 9), (7, 5)\}$.

18. $\{(-1, 2), (-2, 5), (9, 6), (5, 7)\}$

19. If $f(x) = 4x + 3$, find $f^{-1}(x)$.

19. $f^{-1}(x) = \frac{1}{4}x - \frac{3}{4}$

20. If $f(x) = 7(2x - 9)$, find $f^{-1}(x)$.

20. $f^{-1}(x) = \frac{1}{14}x + \frac{63}{14}$

Bonus For what value of k does $kx + 7y = 10$ have a slope of 3?

B: