

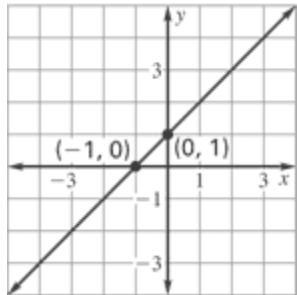
Algebra 1 Chapter 5 Test Review

Write an equation of the line in slope-intercept form.

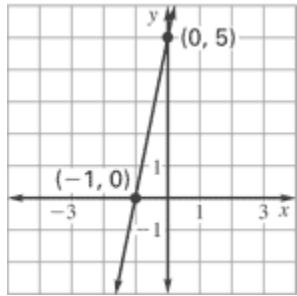
1. The slope is -5 ; the y -intercept is 7 .
2. The slope is 10 ; the y -intercept is -3 .

Write an equation of the line shown in the graph.

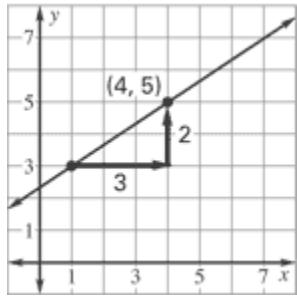
3.



4.



5.



6. Write a linear equation to model the situation. You borrow \$70 from your brother. To repay the loan, you pay him \$7 per week.

Write an equation of the line that passes through the point and has the given slope. Write the equation in slope-intercept form.

7. $(3, 0)$, $m = -2$

8. $(1, 2)$, $m = 2$

Write an equation of the line that is parallel to the given line and passes through the given point.

9. $y = x + 3$, $(5, 0)$

10. $y = 2x + 3$, $(-4, 1)$

Write an equation in slope-intercept form of the line that passes through the points.

11. $(-4, 2)$, $(1, -1)$

12. $(-2, -1)$, $(3, 5)$

Write an equation of the line that is perpendicular to the given line and passes through the given point.

13. Write an equation of a line that is perpendicular to
- $y = 2x + 3$
- and passes through
- $(3, 4)$
- .

Write the equation in standard form with integer coefficients. ($Ax+By=C$)

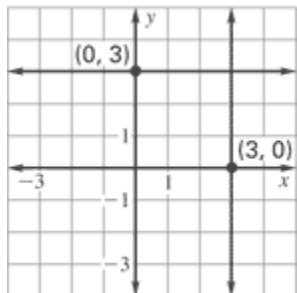
14. $5x - y + 6 = 0$

15. $y = -3x + 9$

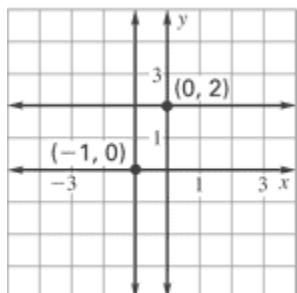
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Write the equations in standard form of the horizontal and vertical lines.

16.

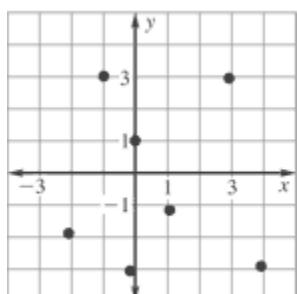


17.

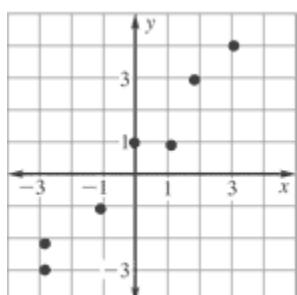


State whether x and y have a *positive correlation*, a *negative correlation*, or *relatively no correlation*.

18.



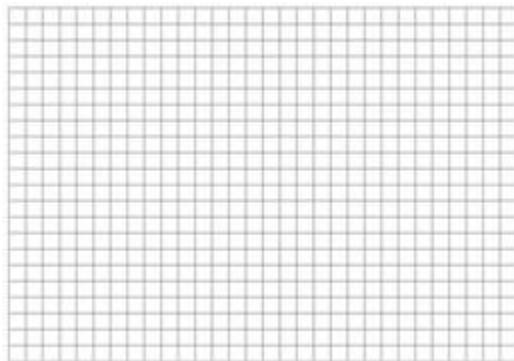
19.



20. The following table relates the number of typing lessons taken by five different students and the number of errors they made on a typing test.

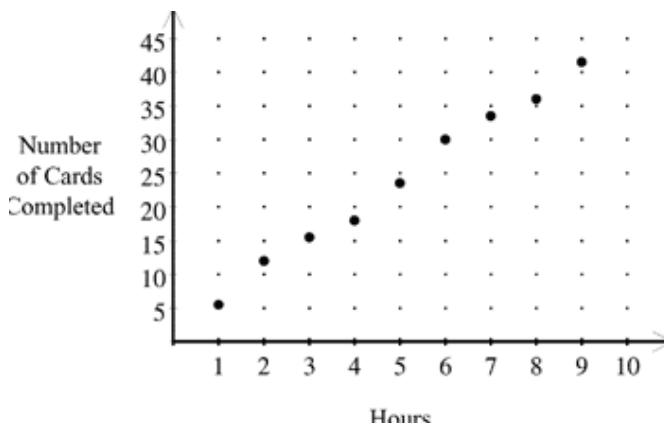
Lessons Taken	Errors
21	12
17	21
34	3
29	6
12	17

- a. Draw a scatter plot that represents the values in the table above.



- b. Does the scatter plot show a positive, a negative, or no correlation between the number of lessons taken and the number of errors?

21. Bianca is making home-made cards to send to friends and family and to sell at the local craft fair. This scatter plot shows the total number of cards she had made after each hour she worked on the task.



Using this information, what is the best prediction of the number of cards Bianca can make in 12 hours?

Write and use an equation of the best-fitting line to approximate the value of y for $x = 3$.

22.

x	0	1	2	4	5
y	0.2	2.3	3.9	7.5	9.8

Algebra 1 Chapter 5 Test Review**Answer Section**

1. ANS:

$$y = -5x + 7$$

PTS: 1 DIF: Level A REF: 5-1

STA: A1.3.6 Represent linear relationships graphically, algebraically (including the slope-intercept form) and verbally and relate a change in the slope or the y-intercept to its effect on the various representations;

TOP: Ch. 5 Test, Level A

KEY: Pre-made Test | slope-intercept form

MSC: Knowledge NOT: 978-0-547-31539-3

2. ANS:

$$y = 10x - 3$$

PTS: 1 DIF: Level A REF: 5-1

STA: A1.3.6 Represent linear relationships graphically, algebraically (including the slope-intercept form) and verbally and relate a change in the slope or the y-intercept to its effect on the various representations;

TOP: Ch. 5 Test, Level A

KEY: Pre-made Test | slope-intercept form

MSC: Knowledge NOT: 978-0-547-31539-3

3. ANS:

$$y = x + 1$$

PTS: 1 DIF: Level A REF: 5-1

STA: A1.3.6 Represent linear relationships graphically, algebraically (including the slope-intercept form) and verbally and relate a change in the slope or the y-intercept to its effect on the various representations;

TOP: Ch. 5 Test, Level A

KEY: Pre-made Test | slope-intercept form

MSC: Knowledge NOT: 978-0-547-31539-3

4. ANS:

$$y = 5x + 5$$

PTS: 1 DIF: Level A REF: 5-1

STA: A1.3.6 Represent linear relationships graphically, algebraically (including the slope-intercept form) and verbally and relate a change in the slope or the y-intercept to its effect on the various representations;

TOP: Ch. 5 Test, Level A

KEY: Pre-made Test | slope-intercept form

MSC: Knowledge NOT: 978-0-547-31539-3

5. ANS:

$$y = \frac{2}{3}x + \frac{7}{3}$$

PTS: 1 DIF: Level A REF: 5-1

STA: A1.3.6 Represent linear relationships graphically, algebraically (including the slope-intercept form) and verbally and relate a change in the slope or the y-intercept to its effect on the various representations;

TOP: Ch. 5 Test, Level A

KEY: Pre-made Test | slope-intercept form

MSC: Knowledge NOT: 978-0-547-31539-3

6. ANS:

$$y = 70 - 7x$$

PTS: 1 DIF: Level B REF: 5-1

NAT: NCTM.PSSM.00.MTH.9-12.PRS.2

STA: A1.3.6 Represent linear relationships graphically, algebraically (including the slope-intercept form)

or the slope and a point of the line; TOP: Ch. 5 Test, Level A
 KEY: Pre-made Test | slope-intercept form MSC: Knowledge
 NOT: 978-0-547-31539-3

13. ANS:

$$y = -\frac{1}{2}x + \frac{11}{2}$$

PTS: 1 DIF: Level A REF: 5-5
 STA: A1.3.9 Understand and identify characteristics (parallel, perpendicular, horizontal, vertical) of linear functions and be able to determine linear equations to match given characteristics
 TOP: Ch. 5 Test, Level A KEY: Pre-made Test | perpendicular
 MSC: Knowledge NOT: 978-0-547-31539-3

14. ANS:

$$5x - y = -6$$

PTS: 1 DIF: Level A REF: 5-4
 STA: A1.3.1 Write an equation of a line when given the graph of the line, a data set, two points on the line, or the slope and a point of the line; TOP: Ch. 5 Test, Level A
 KEY: Pre-made Test | standard form MSC: Knowledge NOT: 978-0-547-31539-3

15. ANS:

$$3x + y = 9$$

PTS: 1 DIF: Level A REF: 5-4
 STA: A1.3.1 Write an equation of a line when given the graph of the line, a data set, two points on the line, or the slope and a point of the line; TOP: Ch. 5 Test, Level A
 KEY: Pre-made Test | standard form MSC: Knowledge NOT: 978-0-547-31539-3

16. ANS:

$$x = 3, y = 3$$

PTS: 1 DIF: Level A REF: 5-4
 STA: A1.3.1 Write an equation of a line when given the graph of the line, a data set, two points on the line, or the slope and a point of the line; TOP: Ch. 5 Test, Level A
 KEY: Pre-made Test | horizontal | vertical MSC: Knowledge
 NOT: 978-0-547-31539-3

17. ANS:

$$x = -1, y = 2$$

PTS: 1 DIF: Level A REF: 5-4
 STA: A1.3.1 Write an equation of a line when given the graph of the line, a data set, two points on the line, or the slope and a point of the line; TOP: Ch. 5 Test, Level A
 KEY: Pre-made Test | horizontal | vertical MSC: Knowledge
 NOT: 978-0-547-31539-3

18. ANS:

relatively no correlation

PTS: 1 DIF: Level A REF: 5-6
 NAT: NCTM.PSSM.00.MTH.9-12.DAP.2.b
 STA: A1.3.3 For bivariate data that appear to form a linear pattern, find the line of best fit by estimating visually and/or using appropriate technology to determine the least squares regression equation. Interpret the slope of the equation for a regression line within the context of the data and use the equation to make

predictions; TOP: Ch. 5 Test, Level A
 MSC: Knowledge NOT: 978-0-547-31539-3

KEY: Pre-made Test | correlation

19. ANS:
 positive correlation

PTS: 1 DIF: Level A REF: 5-6

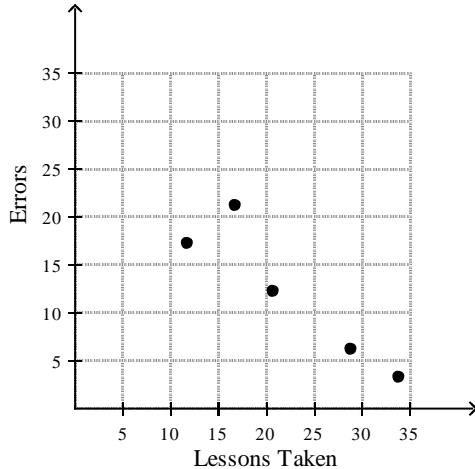
NAT: NCTM.PSSM.00.MTH.9-12.DAP.2.b

STA: A1.3.3 For bivariate data that appear to form a linear pattern, find the line of best fit by estimating visually and/or using appropriate technology to determine the least squares regression equation. Interpret the slope of the equation for a regression line within the context of the data and use the equation to make predictions; TOP: Ch. 5 Test, Level A
 MSC: Knowledge NOT: 978-0-547-31539-3

KEY: Pre-made Test | correlation

20. ANS:

a.



b. The scatter plot shows a negative correlation.

PTS: 1 DIF: Level A REF: 5-6

NAT: NCTM.PSSM.00.MTH.9-12.DAP.1.d | NCTM.PSSM.00.MTH.9-12.DAP.2.b

STA: A1.3.3 For bivariate data that appear to form a linear pattern, find the line of best fit by estimating visually and/or using appropriate technology to determine the least squares regression equation. Interpret the slope of the equation for a regression line within the context of the data and use the equation to make predictions; TOP: Ch. 5 Test, Level A
 KEY: Pre-made Test | correlation | causation | scatter plot | predictions
 MSC: Analysis NOT: 978-0-547-31539-3

21. ANS:
 54

PTS: 1 DIF: Level A REF: 5-7

NAT: NCTM.PSSM.00.MTH.9-12.ALG.3.c | NCTM.PSSM.00.MTH.9-12.PRS.2

STA: A1.3.3 For bivariate data that appear to form a linear pattern, find the line of best fit by estimating visually and/or using appropriate technology to determine the least squares regression equation. Interpret the slope of the equation for a regression line within the context of the data and use the equation to make predictions; TOP: Lesson 5.7 Predict with Linear Models
 KEY: graph | estimate | scatter plot | predict MSC: Knowledge
 NOT: 978-0-547-31539-3

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22. ANS:

5.9

PTS: 1 DIF: Level B REF: 5-7

STA: A1.3.3 For bivariate data that appear to form a linear pattern, find the line of best fit by estimating visually and/or using appropriate technology to determine the least squares regression equation. Interpret the slope of the equation for a regression line within the context of the data and use the equation to make predictions; TOP: Lesson 5.7 Predict with Linear Models

KEY: Linear interpolation | best-fitting line

MSC: Knowledge

NOT: 978-0-547-31539-3