

Algebra 1 Test Review Chapter 5: Linear Equations: 5.1 - 5.5 Chapters 1-4 Spiral

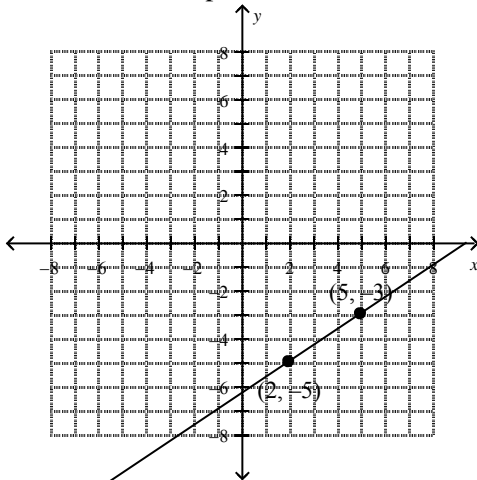
- *Review for Chapter 5 is due on the day of the test.*
- *Review will not be graded unless answers are written on separate paper.*
- *In order to be eligible to retest, this review must be complete, accurate, and turned in.*

Part 1

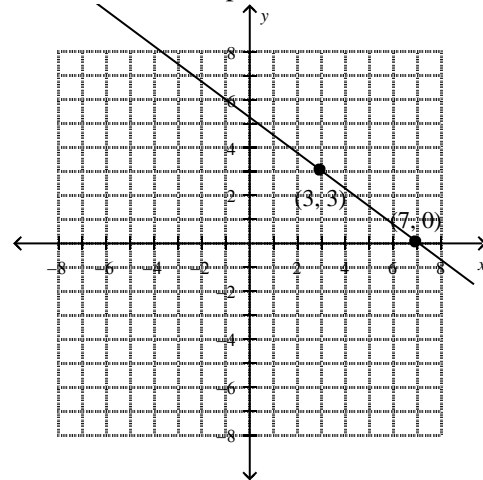
1. Tell whether the set of ordered pairs $\{(1, 1), (3, 5), (5, 9), (7, 13)\}$ satisfies a linear function. Explain.
2. Tell whether the function $y = 5x - 3$ is linear. If so, graph the function.
3. Find the x - and y -intercepts of $-x + 2y = 8$.
4. Find the x - and y -intercepts of $-4x - 2y = 12$.
5. Find the x - and y -intercepts of $2x - 2y = 6$.
6. A clothing manufacturer needs 2.4 yards of fabric to make a jacket and 1.6 yards of fabric to make a matching skirt. The number of jackets, x , and coats, y , that can be made from a 48-yard bolt of fabric can be represented by the equation $2.4x + 1.6y = 48$. Graph the function and find its intercepts. What does each intercept represent?
7. Use intercepts to graph the line described by the equation $3x + 2y = 6$.
8. Use intercepts to graph the line described by the equation $-2x + 3y = 18$.
9. Jim drove for several hours, recording the distance he had traveled in miles. Graph the data and show the rates of change.

Hours	1	4	6	7	10
Miles	50	220	300	320	500

10. Find the slope of the line.



11. Find the slope of the line.



12. Find the slope of the line that contains $(7, 9)$ and $(10, 12)$.

Problems #13-15: Find the slope of the line that passes through the pair of points.

13. $(1, 7), (10, 1)$
14. $(5, 8), (6, 3)$

15. $(5n, 8n), (7n, 9n)$, (where n is not equal to zero).
16. Find the slope of the line described by $x - 3y = -6$.
17. Find the slope of the line described by $-4x + 5y = 80$.
18. Find the slope of the line described by $-x - 6y = -18$.
19. A balloon takes off from a location that is 158 ft above sea level. It rises 56 ft/min. Write an equation to model the balloon's elevation h as a function of time t .
20. Find the rate of change for the situation: a chef cooks 9 lbs of chicken for 36 people and 17 lbs of chicken for 68 people.
21. Tell whether the equation $-x + 4y = -2$ represents a direct variation. If so, identify the constant of variation.
22. Tell whether the equation $3(y - 4) = 5x - 12$ represents a direct variation. If so, identify the constant of variation.

For # 23 and #24: Determine whether y varies directly with x . If so, find the constant of variation k and write the equation

23.

x	-10	-9	1
y	20	18	-2

24.

x	y
6	24
18	72
54	238
162	648

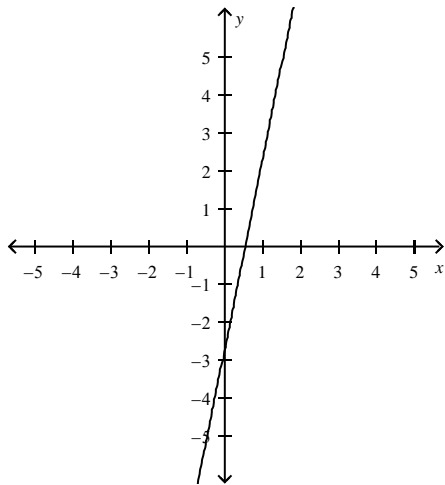
25. Laura charges \$9 per hour for baby-sitting. The amount of money she makes varies directly with the number of hours she baby-sits. Write a direct variation equation for the amount of money that she earns for baby-sitting x -hours. Then graph. If Laura baby-sits for $6\frac{1}{2}$ hours, how much money will she get paid?

PART 2 Spiral Review: You need to review your previous chapter test review for preparation of the spiral exam.

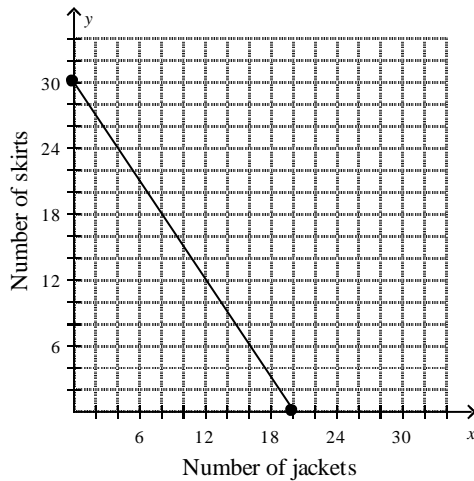
Chapter 5: 5.1 - 5.5 Exam Review Answer Section

SHORT ANSWER

- Yes; there is a constant change in x that corresponds to a constant change in y .
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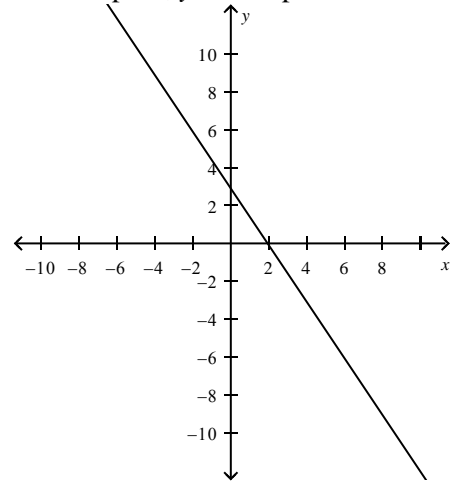
- x -intercept: -8 , y -intercept: 4
- x -intercept: -3 , y -intercept: -6
- x -intercept: 3 , y -intercept: -3
-



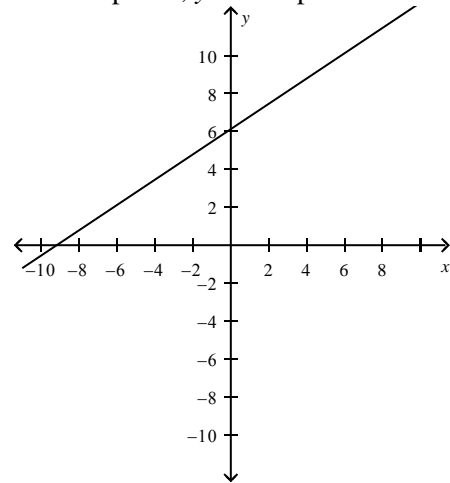
The x -intercept is $(20, 0)$. The x -intercept gives the total number of jackets that can be made from one bolt of fabric when only jackets are made.

The y -intercept is $(0, 30)$. The y -intercept gives the total number of skirts that can be made from one bolt of fabric when only skirts are made.

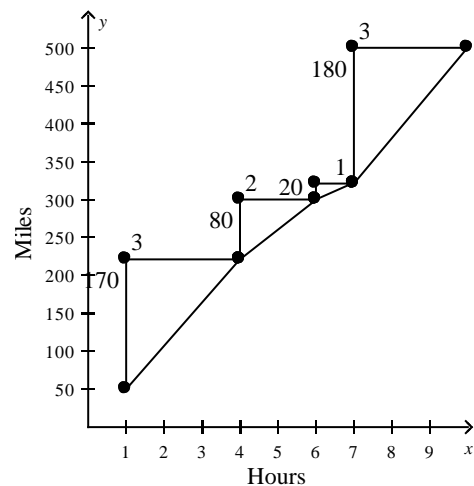
- x -intercept: 2 , y -intercept: 3



- x -intercept: -9 , y -intercept: 6



-



10 – 18 find the slope of the line

10. $\frac{2}{3}$

11. $-\frac{3}{4}$

12. $-\frac{5}{3}$

13. $-\frac{2}{3}$

14. -5

15. $\frac{1}{2}$

16. $\frac{1}{3}$

17. $\frac{4}{5}$

18. $-\frac{1}{6}$

19. $h = 56t + 158$

20. $\frac{1}{4}$ lb per person

21. Not a direct variation.

22. D.V $k=5/3$

23. This is a direct variation, because it can be written as $y = -2x$, where $k = -2$.

24. yes; $k = 4$; $y = 4x$

25. $y=9x$