Name _____ Date _____

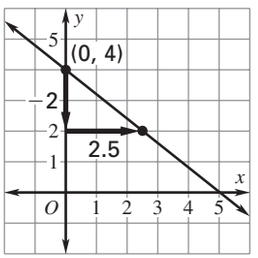
CHAPTER 5

Chapter Test C

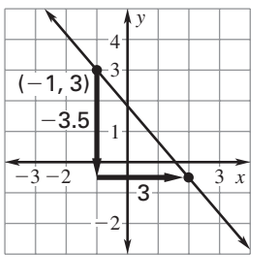
For use after Chapter 5

Write an equation in the given form of the line shown.

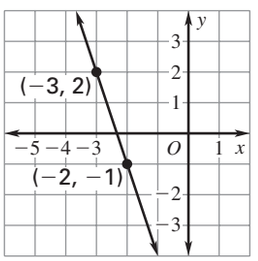
1. Slope-intercept form



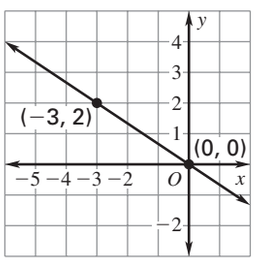
2. Point-slope form



3. Standard form



4. Slope-intercept form



5. The freezing point of water is 0°C or 32°F. The boiling point of water is 100°C or 212°F. Develop the formula that relates the number of degrees in Fahrenheit to the number of degrees in Celsius.

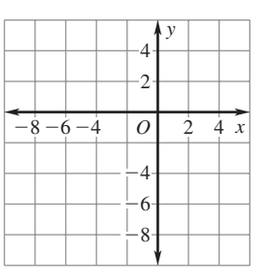
Write an equation for a linear function *f* that has the given values.

6. $f(-3) = 2$ and $f(-2) = -1$

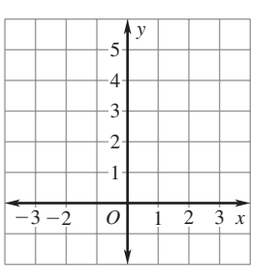
7. $f(-2) = -\frac{3}{4}$ and $f(-5) = \frac{3}{4}$

Graph the equation.

8. $y + 2 = -\frac{4}{3}(x + 5)$



9. $y - 4 = \frac{1}{3}(x - 1)$



Find the value of *k* so that the three points lie on the same line. Write the equation of the line in point-slope form.

10. $(1, -2), (-2, 4), (4, k)$

11. $(2, 2), (-1, 5), (3, k)$

Answers

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. See left.

9. See left.

10. _____

11. _____

Name _____ Date _____

CHAPTER 5

Chapter Test C *continued*

For use after Chapter 5

Write an equation in standard form of the line that passes through the given point and has the given slope *m* or that passes through the given points.

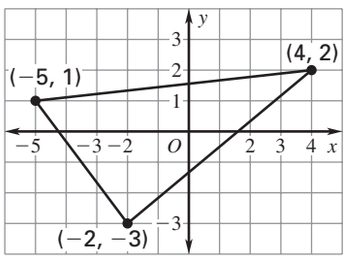
12. $(-5, -4)$, $m = \frac{2}{5}$

13. $(3, -2)$, $m = 0$

14. $(4, 9)$, $(4, -1)$

15. $(-2, 4)$, $(4, 1)$

16. Determine whether the figure is a right triangle. A right triangle contains one 90° angle. Justify your answer using slopes.



In Exercises 17–21, use the table. It shows the gas mileages (in miles per gallon) for cars of different weights (in thousands of pounds).

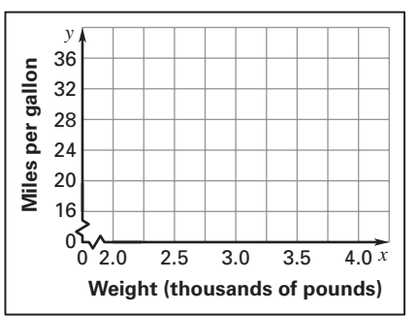
Weight	2	2.4	2.5	2.8	2.9	3.1	3.2	3.5	3.6	3.9
Mileage	34	34	28	23	25	23	23	22	24	18

17. Make a scatter plot of the data.

18. Describe the correlation.

19. Use technology to find the equation of the best-fitting line for the data.

20. Predict the gas mileage for a car the weights 3400 pounds.



21. Find the zero of the function from Exercise 21 and explain what it means in this situation.

Answers

12. _____

13. _____

14. _____

15. _____

16. _____

_____

_____

17. See left.

18. _____

_____

_____

_____

19. _____

20. _____

21. _____