

Chapter 4

Test B

1. Your sister earns \$12.00 an hour during her first hour of work, \$17.00 during her second hour, and \$22.00 during her third hour. If this pattern continues, how much money will she earn during her 9th hour of work?
2. Write a linear function f with the given values.
 - a. $f(2) = 0, f(4) = 12$
 - b. $f(-5) = 45, f(0) = 30$
3. For what value of a are the graphs of $5y = -2x + 10$ and $3y = ax - 15$ parallel? perpendicular?

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

4. slope = $\frac{2}{5}$; passes through $(-3, 1)$
5. passes through $(3, 5)$ and $(-1, 5)$
6. parallel to the line $2x - y = 7$; passes through $(-5, -3)$
7. perpendicular to the line $y = -\frac{3}{2}x - 7$; passes through $(-3, -4)$
8. perpendicular to the line $2x - 5 = -11$; passes through $(7, 5)$
9. slope = $\frac{1}{2}$; x -intercept = 3
10. slope = -3 ; passes through $(4, -7)$
11. parallel to the line $2x - 5y = -20$; passes through $(7, 6)$
12. perpendicular to the line $y = 3x + 8$; passes through $(-4, 1)$

Determine whether the sequence is arithmetic. If so, find the common difference.

- | | |
|--|-----------------------------------|
| 13. $-3, -1, 3, 5, \dots$ | 14. $-1, -7, -13, -19, \dots$ |
| 15. $-\frac{1}{6}, \frac{1}{6}, \frac{1}{2}, \frac{5}{6}, \dots$ | 16. $-1.2, -0.1, 0.8, 1.7, \dots$ |

Answers

1. _____

2. a. _____
b. _____
3. _____

4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____

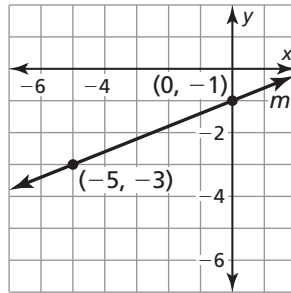
14. _____

15. _____

16. _____

Chapter 4 **Test B** (continued)

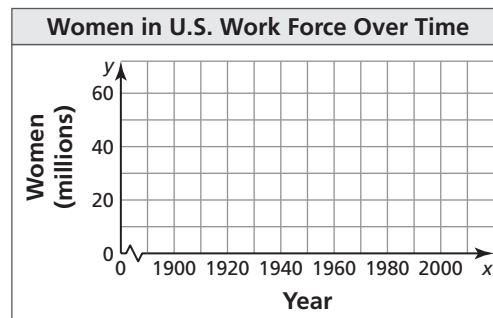
17. Line m represents a translation of line ℓ 2 units up and 3 units right. Write an equation that represents the equation of line ℓ .



18. The table shows the number of women (in millions) in the U.S. work force at various times during the past century.

Year, x	1900	1920	1930	1950	1970	1990
Number, y	5	8	10	16	31	57

- Make a scatter plot of the data. Describe the correlation.
- Use a graphing calculator to find an equation of the line of best fit.
- Identify and interpret the correlation coefficient.



Answers

17. _____

18. a. See left.

b. _____

c. _____

19. _____

20. _____

21. _____

22. _____

23. _____

24. _____

Determine whether the given lines are parallel, perpendicular, or neither.

19. $2x - 3y = 9$
 $4x - 5y = 15$

20. $x = 5$
 $2x - 3 = 15$

21. $2 - x = 3y$
 $2y + 10 = 6x$

22. $y + x = \frac{1}{2}x + 1$
 $2x - y = 3$

Tell whether a correlation is likely in the situation. Explain your reasoning.

23. the amount of gas in a car's tank and the number of miles driven

24. the height of a person and the length of the person's hair