Name _____ Period _____ Date _____

Solve the following in the spaces provided. SHOW ALL WORK.
Selected Exercises 4.2 p. 236-239

Write an equation of the line that passes through the given point and has the given slope *m*.

3. $(1, 1)$; $m = 3$ **4.** $(5, 1)$; $m = 2$ **5.** $(-4, 7)$; $m = -5$

6. $(5, -5)$; $m = -2$ **7.** $(8, -4)$; $m = -\frac{3}{4}$ **8.** $(-3, -11)$; $m = \frac{1}{2}$

Write an equation of the line that passes through the given points.

11. $(1, 4)$, $(2, 7)$ **12.** $(3, 2)$, $(4, 9)$ **13.** $(10, -5)$, $(-5, 1)$

14. $(-2, 8)$, $(-6, 0)$ **15.** $\left(\frac{9}{2}, 1\right), \left(-\frac{7}{2}, 7\right)$ **16.** $\left(-5, \frac{3}{4}\right), \left(-2, -\frac{3}{4}\right)$

Write an equation of the line shown.

17.

(4, 1)

1

1

x

y

(3, −3)

18.

(3, 2)

2

(−2, 0)

1

x

y

19.

(−3, 2)

2

(1, 0)

3

x

y

20.

(−1, 3)

1

1

(2, −0.5)

x

y

21.

1

1

(−2, −2)

(1, −1)

x

y

22.

(−3, 2)

1

1

(−2, −1)

x

y

35
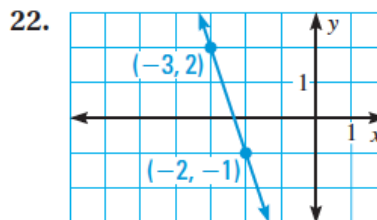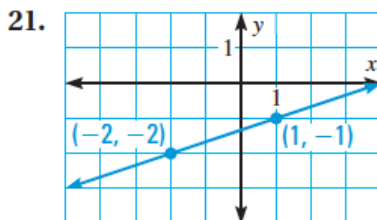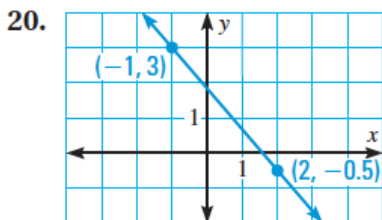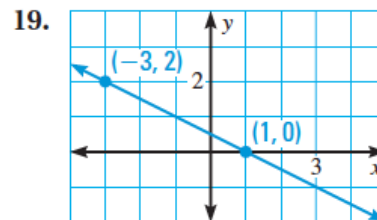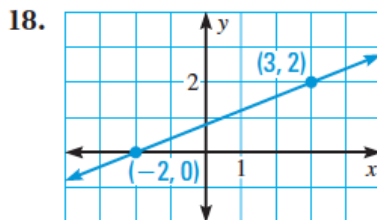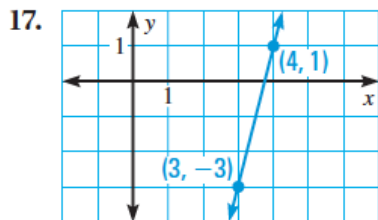
In Exercises 38–41, use the graph at the right.

38. Write an equation of the line shown.

39. Write an equation of a line that has the same y-intercept as the line shown but has a slope that is 3 times the slope of the line shown.

40. Write an equation of a line that has the same slope as the line shown but has a y-intercept that is 6 more than the y-intercept of the line shown.

41. Which of the lines from Exercises 38–40 intersect? Which of the lines never intersect? *Justify* your answers.
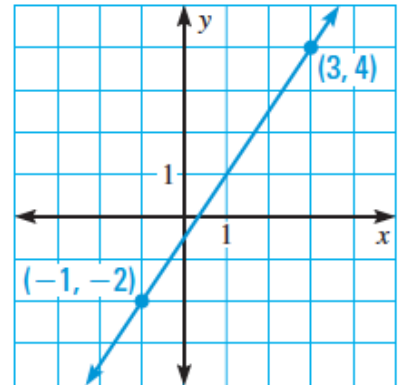
51. NEWSPAPERS Use the information in the article "Sunday Papers Increase" about the circulation of Sunday newspapers.

a. About how many Sunday newspapers were in circulation in 1970?

Sunday Edition C9

SUNDAY PAPERS INCREASE
From 1970 to 2000, the number of Sunday newspapers in circulation increased at a relatively constant rate of 11.8 newspapers per year. In 1997 there were 903 Sunday newspapers in circulation.

b. Write an equation that gives the number of Sunday newspapers in circulation as a function of the number of years since 1970.

c. About how many Sunday newspapers were in circulation in 2000?