**Lesson 6-1:** Solve each system by graphing.

**1.** $x - y = 2$
$3x + 2y = 6$

$(2,0)$



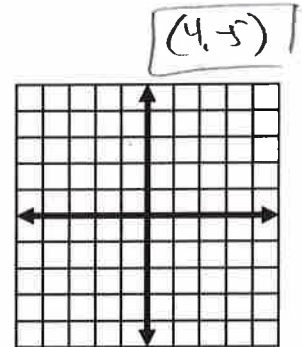**2.** $y = 2x + 3$
$y = -\frac{3}{2}x - 4$

$(-2,-1)$



**3.** $y = -2x + 3$
$3x + 4y = -8$

$(4,-5)$
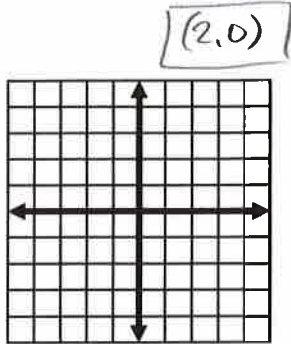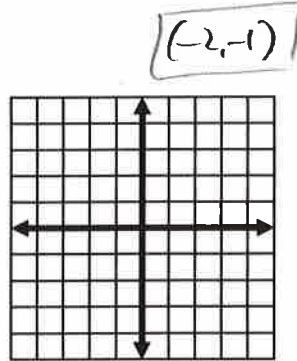


**Lesson 6-2:** Solve each system by using substitution.

**6.** $x - y = 13$
$y - x = -13$

Infinitely many solutions

**7.** $3x - y = 4$
$x + 5y = -4$

$(1,-1)$

**8.** $x + y = 4$
$y = 7x + 4$

$(0,4)$

**Lesson 6-3**

**Solve each system by elimination.**

**11.** $x + y = 19$
$x - y = -7$

$(6,13)$

**12.** $-3x + 4y = 29$
$3x + 2y = -17$

$(-7,2)$

**13.** $3x + y = 3$
$-3x + 2y = -30$

$(4,-9)$

**14.** $6x + y = 13$
$y - x = -8$

$(-3,-5)$

**15.** $4x - 9y = 61$
$10x + 3y = 25$

$(4,-5)$

**16.** $4x - y = 105$
$x + 7y = -10$

$(25,-5)$

**Lesson 6-4**: Write a system of equations to model each problem and solve.

19. A shoe store pays $1980 dollars a month for rent. The average profit on each pair of men's shoes is $25, and the average profit on each pair of women's shoes is $65. They usually sell 3 times as many pairs of women's shoes as men's. How many pairs of shoes of each type of shoe must the store sell each month to pay the rent?

*To pay the rent, the store must sell 9 pairs of men's shoes and 27 pairs of women's shoes each month.*

20. Suppose you have 12 coins that total 32 cents. Some of the coins are nickels and the rest are pennies. How many of each coin do you have?

*You have 5 nickels and 7 pennies.*

21. Claire bought three bars of soap and five sponges for $2.31. Steve bought five bars of soap and three sponges for $3.05. Find the cost of each item.

*Bars of soap cost $.52 and sponges cost $.25 each.*

**Lesson 6-5**: Determine whether the ordered pair is a solution of the linear inequality.

27. $y > x - 7$; (2, 5) *Yes*
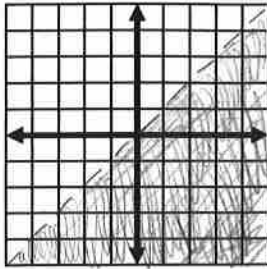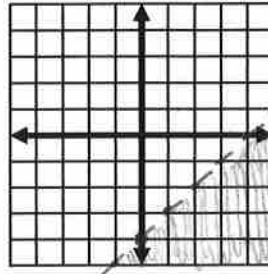
28. $x \leq 3$; (−2, 6) *Yes*

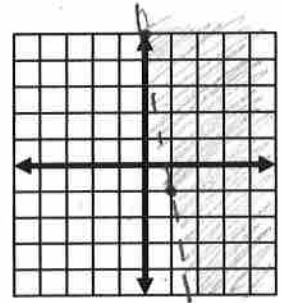29. $y \geq 4x + 3$; (3, 9) *No*

**Graph each linear inequality.**

**30.** $y < x$

**31.** $y < x - 4$

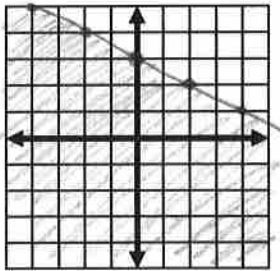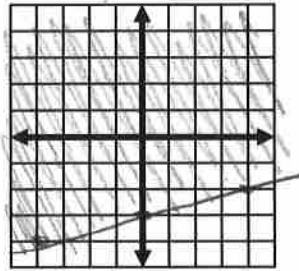**32.** $y > -6x + 5$

**33.** $y \le 3 - \dfrac{1}{2}x$

**34.** $y \ge \dfrac{1}{4}x - 3$

**35.** $2x - 3y \le 6$