

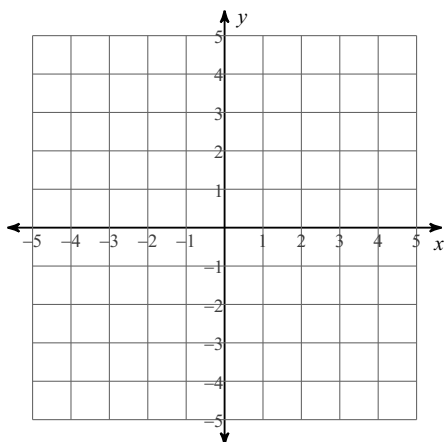
Chapter 6 PRACTICE Test

Period _____

Solve each system by graphing if possible.

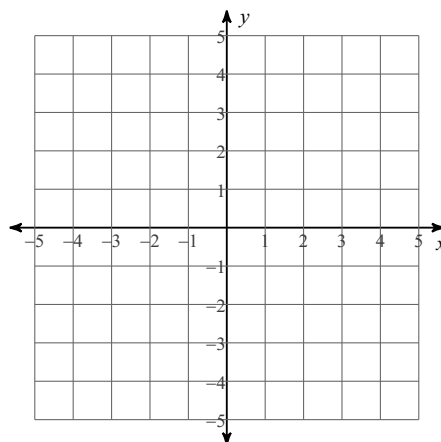
1) $y = -\frac{1}{2}x + 3$

$y = -3x - 2$



2) $x = 4$

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

**Solve each system by ELIMINATION.**

3) $-4x + 5y = 7$

$4x - 3y = -1$

4) $5x - 3y = -7$

$8x - 3y = -13$

5) $-4x + 6y = -12$

$8x - 12y = 24$

6) $2x - 3y = -5$

$-9x + 4y = 13$

Solve each system by SUBSTITUTION.

7) $3x + 6y = -3$

$y = -3x - 18$

8) $y = 3x - 5$

$-x + 4y = 2$

$$\begin{aligned} 9) \quad & -x + y = 5 \\ & -8x - y = 4 \end{aligned}$$

$$\begin{aligned} 10) \quad & -3x + 9y = 1 \\ & x - 3y = -7 \end{aligned}$$

Solve the system by using the method of your choice. Justify your choice of method.

$$\begin{aligned} 11) \quad & 5x + y = -13 \\ & -3x + 2y = 13 \end{aligned}$$

$$\begin{aligned} 12) \quad & -7x - 6y = -4 \\ & 14x + 12y = 8 \end{aligned}$$

$$\begin{aligned} 13) \quad & y = 4x - 8 \\ & y = 7x - 20 \end{aligned}$$

$$\begin{aligned} 14) \quad & y = -7x + 3 \\ & y = -5x + 1 \end{aligned}$$

Determine whether the linear system has one solution, no solutions, or infinitely many solutions and state how you know.

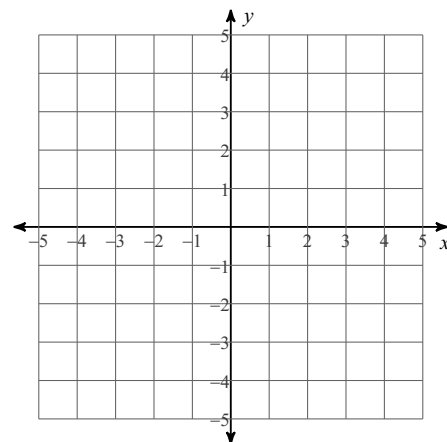
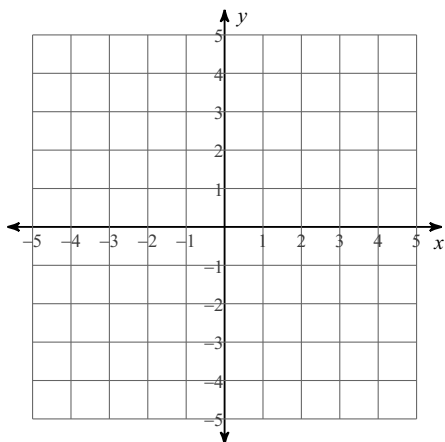
$$\begin{aligned} 15) \quad & 3x + 6y = 12 \\ & y = -\frac{1}{2}x - 2 \end{aligned}$$

$$\begin{aligned} 16) \quad & y = \frac{7}{2}x + 4 \\ & y = -\frac{1}{2}x - 4 \end{aligned}$$

Sketch the solution to each system of inequalities.

$$\begin{aligned} 17) \quad & 3x + 2y \leq -2 \\ & x + 2y > 2 \end{aligned}$$

$$\begin{aligned} 18) \quad & y < -2x - 3 \\ & y \leq 3x + 2 \end{aligned}$$



- 19) During the summer, you want to earn at least \$360 per week. You earn \$20 per hour umpiring baseball, and you earn \$15 per hour personal training your neighbor. You can work at most 30 hours per week.

Write and graph (label your axes) a system of linear inequalities that model the situation to state a combination of umpiring and training hours that satisfy the conditions.

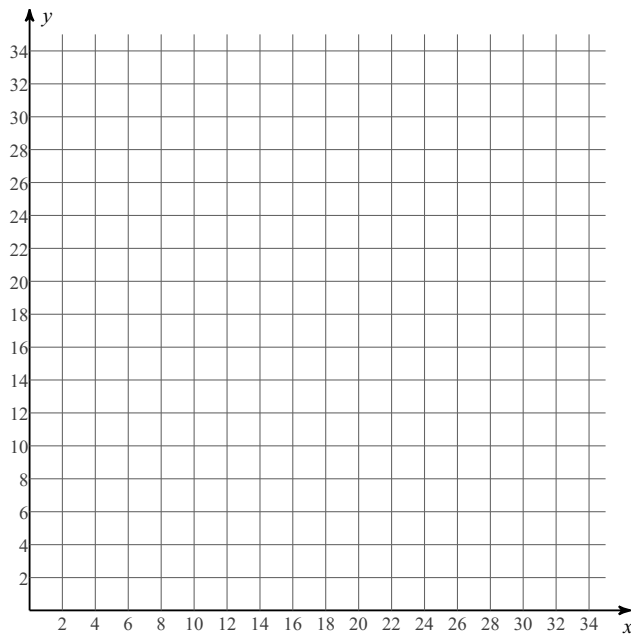
Let x = the number of hours umpiring

Let y = the number of hours training

Inequality 1: _____

Inequality 2: _____

Solution: (,)



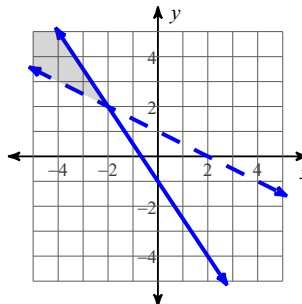
- 20) In the system below, what would the value of A have to equal so the system has no solutions? Explain how you know.

$$10x + 8y = 23$$

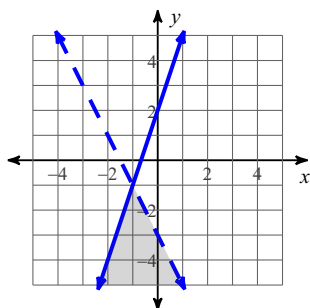
$$Ax - 8y = 15$$

Answers to Chapter 6 PRACTICE Test

- | | | | |
|----------------------------------|----------------|-----------------|---------------|
| 1) $(-2, 4)$ | 2) $(4, -1)$ | 3) $(2, 3)$ | 4) $(-2, -1)$ |
| 5) Infinite number of solutions | 6) $(-1, 1)$ | 7) $(-7, 3)$ | |
| 8) $(2, 1)$ | 9) $(-1, 4)$ | 10) No solution | 11) $(-3, 2)$ |
| 12) Infinite number of solutions | 13) $(4, 8)$ | 14) $(1, -4)$ | |
| 15) No solution | 16) $(-2, -3)$ | 17) | |



18)



19) $20x + 15y \geq 360$ and $x + y \leq 30$

20) $A = -10$