

**Chapter 6 Review**

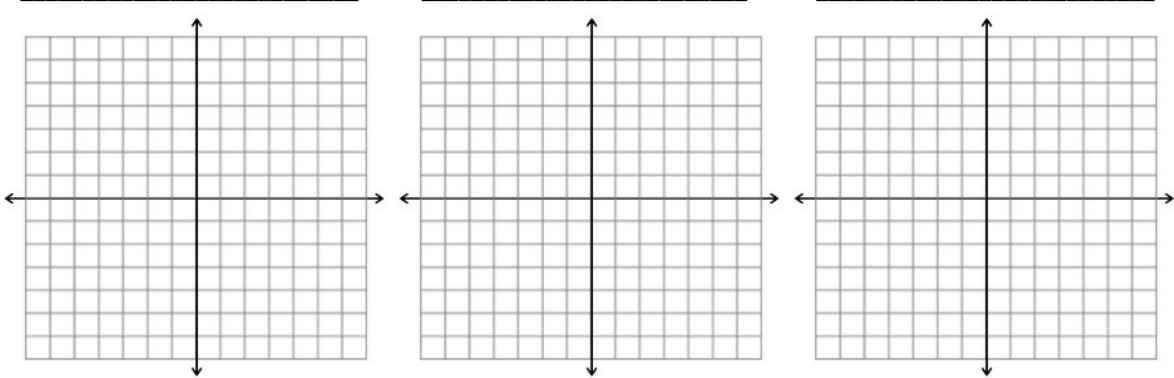
Form G

Solve each system by **graphing (6.1)**.Tell whether the system has *one solution*, *infinitely many solutions*, or *no solution*.

$$\begin{aligned} 1. \quad & y = -2x - 2 \\ & y = 2x + 6 \end{aligned}$$

$$\begin{aligned} 2. \quad & x + y = 3 \\ & 4x - y = 2 \end{aligned}$$

$$\begin{aligned} 3. \quad & 4y = -2x + 12 \\ & 6y = -3x + 12 \end{aligned}$$

Solve each system using **substitution (6.2)**.

$$\begin{aligned} 4. \quad & x = 4y \\ & x + 2y = 66 \end{aligned}$$

$$\begin{aligned} 5. \quad & y = x - 7 \\ & 3x + y = 17 \end{aligned}$$

$$\begin{aligned} 6. \quad & y = x + 2 \\ & 2x + y = 8 \end{aligned}$$

Solve each system using **elimination (6.3)**.

$$\begin{aligned} 7. \quad & x + y = 4 \\ & x - y = 6 \end{aligned}$$

$$\begin{aligned} 8. \quad & -2x + 3y = 9 \\ & 2x - 2y = -4 \end{aligned}$$

$$\begin{aligned} 9. \quad & x + y = 7 \\ & 3x - 2y = 11 \end{aligned}$$

$$\begin{aligned} 10. \quad & 7x - 8y = 11 \\ & 8x - 7y = 7 \end{aligned}$$

$$\begin{aligned} 11. \quad & 0.4x + 0.3y = 1.7 \\ & 0.7x - 0.2y = 0.8 \end{aligned}$$

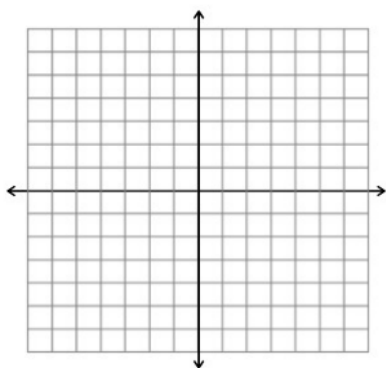
$$\begin{aligned} 12. \quad & 3x - 7y + 10 = 0 \\ & y - 2x - 3 = 0 \end{aligned}$$

Write a system of equations to model each situation. Solve by any method. (6.4)

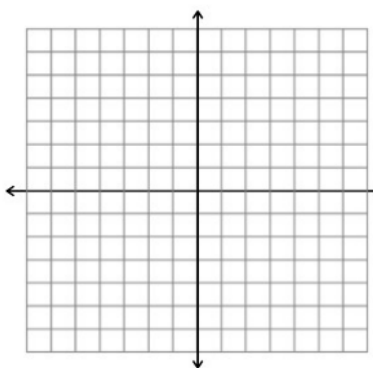
13. A wallet contains a total of 61 bills, a combination of \$1 bills & \$5 bills. The total value of the bills is \$201. How many bills of each type does the wallet contain?

Graph each inequality in the coordinate plane (6.5).

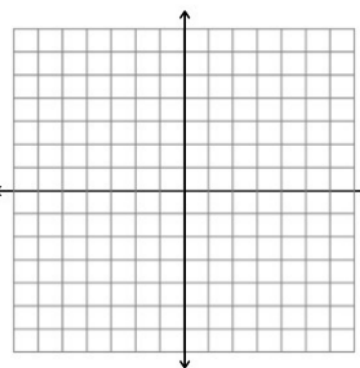
14.  $2x + 3y \leq 6$



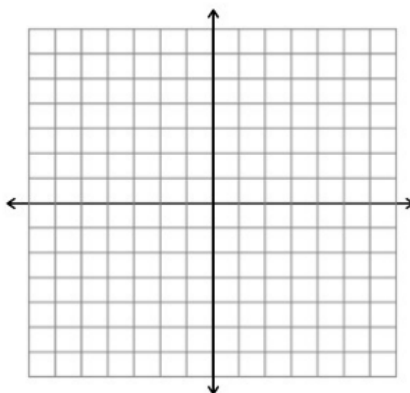
15.  $2x - y \geq 1$



16.  $-3x + 2y < 5$



17. For a party, you can spend no more than \$20 on cakes. Egg cake cost \$4 and cream cake cost \$2. Write the linear inequality that models the situation. Graph the inequality.

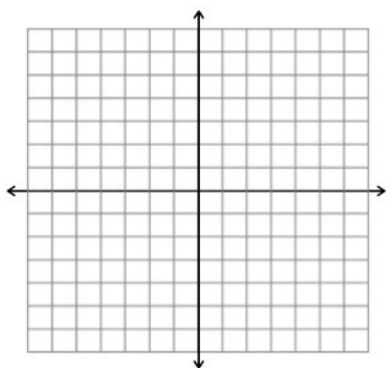


18. **Error Analysis** A student determined that (1, 1) is one of the solutions of the linear inequality  $y \leq 2x - 3$ , as shown below. What error did the student make?

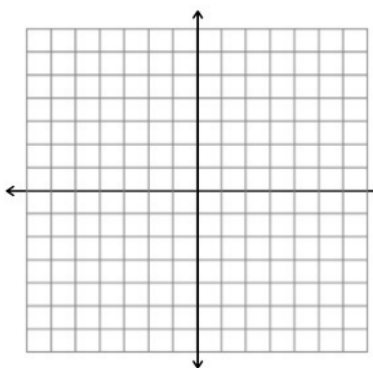
$$\begin{aligned} y &\leq 2x - 3 \\ 1 &\leq 2(1) - 3 \\ 1 &\leq 1 \end{aligned}$$

Solve each system by graphing(6.6).

19.  $y \leq 5x + 1$   
 $y > x - 3$



20.  $y > 4x + 3$   
 $y \geq -2x - 1$



21.  $y > -x + 2$   
 $y > x - 4$

