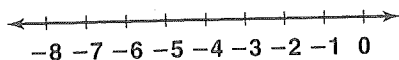


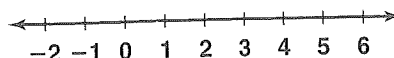
Skill: Solving Linear Inequalities**Investigation 2****The Shapes of Algebra**

Solve each inequality. Graph the solutions on the number line.

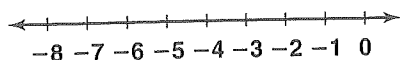
1. $m + 6 > 2$



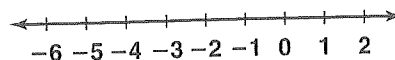
2. $q + 4 \leq 9$



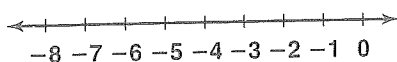
3. $w - 6 > -9$



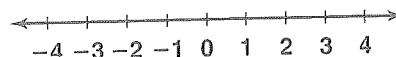
4. $y - 3 < -4$



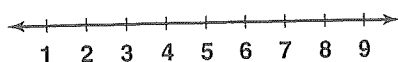
5. $-5m < 20$



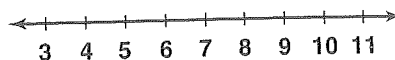
6. $\frac{j}{6} \leq 0$



7. $4v > 16$



8. $\frac{b}{2} < 4$



Skill: Standard Form and Slope-Intercept Form**Investigation 3****The Shapes of Algebra**

Write each equation in $y = mx + b$ form.

1. $3y = 15x - 12$

2. $5x + 10 = 10y$

3. $3y - 21 = 12x$

4. $5y + 3 = 2y - 3x + 5$

5. $-2(x + 3y) = 18$

6. $5(x + y) = 20 + 5x$

Skill: Standard Form and Slope-Intercept Form (cont.)**Investigation 3**

The Shapes of Algebra

Write each equation in $ax + by = c$ form.

7. $y = 4x - 11$

8. $y = 2x - 6$

9. $y = -2x - 3$

10. $y = 5x - 32$

11. $y = \frac{2}{3}x - \frac{25}{3}$

12. $y = 43 - 4x$

13. $y = -\frac{4}{5}x + \frac{6}{5}$

14. $y = -\frac{x}{5}$

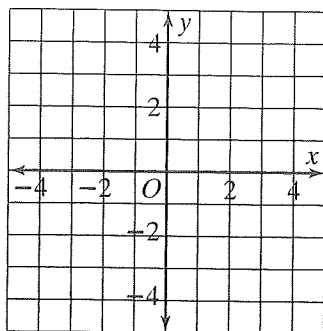
Skill: Solving Linear Systems

Investigation 3

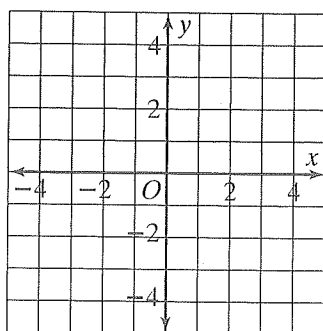
The Shapes of Algebra

Use graphing methods to find solutions for these systems of linear equations.

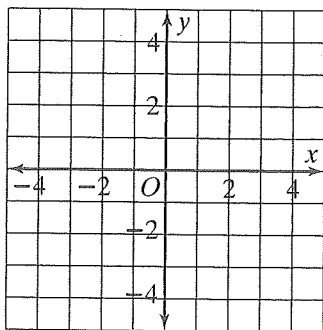
1. $2x + y = 1$
 $x - 2y = 3$



2. $y + 2 = 0$
 $2x + y = 0$



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



Additional Practice**Investigation 4****The Shapes of Algebra**

1. Solve each of the following systems of equations.

a. $y = 3x - 2$
 $y = 2x + 3$

b. $y = 7x + 4$
 $y = 9x - 6$

c. $y = 22x + 4$
 $y = 14x + 28$

d. $y = -x + 9$
 $y = 2x + 30$

e. $y = 2x + 6$
 $y = x + 3$

f. $y = -5x + 8$
 $y = -2x - 7$

Additional Practice *(continued)*

Investigation 4

The Shapes of Algebra

2. Rewrite the following equations in equivalent $y = mx + b$ form:

a. $2x + 3y + 6 = 0$

b. $-5x + 10y + 15 = 0$

c. $-6x - 2y - 3 = 0$

d. $-4x + y = 0$

e. $4x - 4y + 2 = 0$

f. $150x + 50y - 25 = 0$

3. Rewrite each of the equations in Exercise 2 in equivalent $x = ny + c$ form.

Additional Practice *(continued)***Investigation 4****The Shapes of Algebra**

4. Solve each of the following systems of equations by substitution.

a. $3x + 2y = 14$
 $y = x + 2$

b. $4x - 2y = 24$
 $y = x - 5$

c. $-3x + 51 = 8y$
 $y = -6x$

d. $y = 4x - 2$
 $3x + 2y = -4$

e. $x = 5y - 26$
 $6x + y = -1$

f. $7x - 2y = 18$
 $x = y$

Skill: Substitution Method for Linear Systems**Investigation 4**

The Shapes of Algebra

Solve each system of equations using substitution.

1. $y = x$
 $y = -x + 2$

2. $y = x + 4$
 $y = 3x$

3. $x = -2y + 1$
 $x = y - 5$

4. $x + 2y = 200$
 $x = y + 50$

Skill: Substitution Method for Linear Systems (cont.)**Investigation 4**

The Shapes of Algebra

Solve each system of equations using substitution.

5.
$$\begin{aligned} 3x - 2y &= 0 \\ x + 2y &= -5 \end{aligned}$$

6.
$$\begin{aligned} 2x + 4y &= -6 \\ x - 3y &= -7 \end{aligned}$$

7.
$$\begin{aligned} 5x - 3y &= -4 \\ 5x + 3y &= -4 \end{aligned}$$

8.
$$\begin{aligned} 3x - y &= 14 \\ 2x + y &= 16 \end{aligned}$$