

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

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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.

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

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5. Solve each of the following systems of equations by combination.

a. $2x - 4y = 10$
 $-2x + 6y = -4$

b. $7x + 10y = 6$
 $7x - 10y = 8$

c. $6x - 7y = -4$
 $-4x - 7y = 26$

d. $x + y = 3$
 $x - y = -9$

e. $-5x - 6y = 16$
 $-5x + 8y = 4$

f. $3x - 2y = 12$
 $-3x + 4y = -8$