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- 1** Use substitution to check whether the coordinate pair  $(3, -6)$  is a solution to the following simultaneous equations.

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

$$2x + 3y = -12$$

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- 2** Use substitution to check whether the coordinate pair  $(-2, 7)$  is a solution to the following simultaneous equations.

$$4x - 7y = -57$$

$$3x + y = -1$$

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**3** Solve the following pair of simultaneous equations using a graphical method.

$$x - y = 1$$

$$2x + y = 11$$

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4 Solve the following pair of simultaneous equations using a graphical method.

$$y = 1 - 4x$$

$$y = 2x + 7$$

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- 5 Using a graphical method, show that the following pair of simultaneous equations do *not* have a solution.

$$y = 2x - 4$$

$$4x - 2y + 9 = 0$$

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- 6** Solve the following equations using a graphical method.

$$y = x^2$$

$$y = x + 6$$

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- 7** Solve the following pair of simultaneous equations using the substitution method.

$$y = 3x - 7$$

$$2x - 5y = 48$$

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- 8** Solve the following pair of simultaneous equations using the substitution method.

$$x + y = 1$$

$$2x - 3y = 17$$

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- 9** Solve the following pair of simultaneous equations using the substitution method.

$$2x - y = 22$$

$$3x - 4y = 53$$

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- 10** Solve the following pair of simultaneous equations using the substitution method.

$$4x = -1 - 3y$$

$$6x - 2y = 5$$