Algebra: Solving Linear Systems — Substitution Method

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DIRECTIONS *Solve each system of equations using the Substitution Method.*

1 Solve using the Substitution Method:

$$\left\{\begin{array}{l}y=3x-10\\2x+2y=4\end{array}\right.$$

Answer: _____

2 Solve using the Substitution Method:

$$\left\{\begin{array}{l}y=2x+3\\3x+3y=0\end{array}\right.$$

Answer: _____

3 Solve using the Substitution Method:

$$\left\{\begin{array}{l}y=2x+5\\1x+3y=-6\end{array}\right.$$

Answer: _____

4 Solve using the Substitution Method:

$$\left\{\begin{array}{l}y=1x-4\\3x+2y=-3\end{array}\right.$$

Answer: _____

5 Solve using the Substitution Method:

$$\left\{\begin{array}{l}y=1x+3\\1x+3y=5\end{array}\right.$$

Answer: _____

6 Solve using the Substitution Method:

$$\left\{\begin{array}{l}y=-2x-2\\2x+2y=0\end{array}\right.$$

Answer: _____

7 Solve using the Substitution Method:

$$\left\{\begin{array}{l}y=3x+6\\1x+3y=8\end{array}\right.$$

Answer: _____

8 Solve using the Substitution Method:

$$\left\{\begin{array}{l}y=3x-10\\2x+3y=3\end{array}\right.$$

Answer: _____

9 Solve using the Substitution Method:

$$\left\{\begin{array}{l}y=1x+0\\2x+1y=6\end{array}\right.$$

Answer: _____

10 Solve using the Substitution Method:

$$\left\{\begin{array}{l}y=2x-5\\3x+1y=10\end{array}\right.$$

Answer: _____

Answer Key & Solutions

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TEACHER NOTES *Solve one equation for a variable, substitute into the other, simplify, then back-solve.*

1 Solve using the Substitution Method:

= $x = 3,\ y = -1$

\left\{\begin{array}{l}y=3x-10\\2x+2y=4\end{array}\right.

2 Solve using the Substitution Method:

= $x = -1,\ y = 1$

\left\{\begin{array}{l}y=2x+3\\3x+3y=0\end{array}\right.

3 Solve using the Substitution Method:

= $x = -3,\ y = -1$

\left\{\begin{array}{l}y=2x+5\\1x+3y=-6\end{array}\right.

4 Solve using the Substitution Method:

= $x = 1,\ y = -3$

\left\{\begin{array}{l}y=1x-4\\3x+2y=-3\end{array}\right.

5 Solve using the Substitution Method:

= $x = -1,\ y = 2$

\left\{\begin{array}{l}y=1x+3\\1x+3y=5\end{array}\right.

6 Solve using the Substitution Method:

= $x = -2,\ y = 2$

\left\{\begin{array}{l}y=-2x-2\\2x+2y=0\end{array}\right.

7 Solve using the Substitution Method:

= $x = -1,\ y = 3$

\left\{\begin{array}{l}y=3x+6\\1x+3y=8\end{array}\right.

8 Solve using the Substitution Method:

= $x = 3,\ y = -1$

\left\{\begin{array}{l}y=3x-10\\2x+3y=3\end{array}\right.

9 Solve using the Substitution Method:

= $x = 2,\ y = 2$

\left\{\begin{array}{l}y=1x+0\\2x+1y=6\end{array}\right.

10 Solve using the Substitution Method:

= $x = 3,\ y = 1$

\left\{\begin{array}{l}y=2x-5\\3x+1y=10\end{array}\right.