

Solving Systems of Equations by Elimination

Solve each system using elimination.

$$\textcircled{1} \begin{cases} 3x - 2y = 0 \\ 4x + 2y = 14 \end{cases} \text{ Add the equations}$$

$$\begin{array}{r} 3x - 2y = 0 \\ 4x + 2y = 14 \\ \hline 7x = 14 \\ 7 \quad 7 \end{array}$$

$$\textcircled{x = 2}$$

$$4x + 2y = 14$$

$$4(2) + 2y = 14$$

$$8 + 2y = 14$$

$$\begin{array}{r} -8 \quad -8 \\ \hline \end{array}$$

$$2y = 6$$

$$\begin{array}{r} 2y = 6 \\ 2 \quad 2 \\ \hline \end{array}$$

$$\textcircled{y = 3}$$

$$\boxed{(2, 3)}$$

$$\textcircled{2} \begin{cases} 6x - 3y = 15 & (4) \\ 7x + 4y = 10 & (3) \end{cases}$$

$$24x - 12y = 60$$

$$21x + 12y = 30$$

$$\begin{array}{r} 24x - 12y = 60 \\ 21x + 12y = 30 \\ \hline 45x = 90 \\ 45 \quad 45 \end{array}$$

$$\textcircled{x = 2}$$

$$6x - 3y = 15$$

$$6(2) - 3y = 15$$

$$12 - 3y = 15$$

$$\begin{array}{r} 12 - 3y = 15 \\ -12 \quad -12 \\ \hline \end{array}$$

$$-3y = 3$$

$$\begin{array}{r} -3y = 3 \\ -3 \quad -3 \\ \hline \end{array}$$

$$\textcircled{y = -1}$$

$$\boxed{(2, -1)}$$