

## Lesson 6-7

**Problem**

Solve:  $x - 4y = 2$       by the method of determinants.  
 $-2x + y = 3$

**Solution**

$$x = \frac{A_x}{A} = \frac{\begin{vmatrix} 2 & -4 \\ 3 & 1 \end{vmatrix}}{\begin{vmatrix} 1 & -4 \\ -2 & 1 \end{vmatrix}} = \frac{2 - (-12)}{1 - 8} = \frac{14}{-7} = -2$$

$$y = \frac{A_y}{A} = \frac{\begin{vmatrix} 1 & 2 \\ -2 & 3 \end{vmatrix}}{\begin{vmatrix} 1 & -4 \\ -2 & 1 \end{vmatrix}} = \frac{3 - (-4)}{1 - 8} = \frac{7}{-7} = -1$$

The solution is (-2, -1).