

zero - find where graph  
crosses  $x$ -axis.

(output,  $y$ , = 0)

Topic: substitution method  
(2 linear equations)

① solve one equation for one  
of the variables ( $x$  or  $y$ )

② substitute right-hand  
side of that eq'n for  
the variable ( $x$  or  $y$ ) in  
the other and solve  
for that variable

③ plug that value into either eq'n to solve for other variable.

#30 p. 151  $y = -\frac{1}{2}x + 8$

$y = 2x - 6$

①  $y = 2x - 6$

②  $2x - 6 = -\frac{1}{2}x + 8$

$\times 2$

$4x - 12 = -x + 16$

$5x = 28$

$x = \frac{28}{5}$

③  $y = 2x - 6 = 2\left(\frac{28}{5}\right) - 6$

$= \frac{56}{5} - \frac{30}{5} = \frac{26}{5} = y$

$$\#30 \text{ p. 151} \quad y = -\frac{1}{2}x + 8$$

$$y = 2x - 6$$

$$\textcircled{1} \quad y = \textcircled{2x - 6}$$

$$\textcircled{2} \quad 2x - 6 = -\frac{1}{2}x + 8$$

$$\left(\frac{2}{5}\right) \frac{5}{2}x = 14 \left(\frac{2}{5}\right)$$

$$x = \frac{28}{5}$$