

Identifying Solutions

Solution - the value of a variable that makes an equation true.

1) $3x + 7 = 13$ ~~$x = -2$~~ $x = 2$ ~~$x = 5$~~

$x = -2$

$$\begin{aligned} 3(-2) + 7 &= 13 \\ -6 + 7 &= 13 \\ 1 &\neq 13 \end{aligned}$$

$x = 2$

$$\begin{aligned} 3(2) + 7 &= 13 \\ 6 + 7 &= 13 \\ \checkmark 13 &= 13 \end{aligned}$$

$x = 5$

$$\begin{aligned} 3(5) + 7 &= 13 \\ 15 + 7 &= 13 \\ 22 &\neq 13 \end{aligned}$$

2) $8 - 2b = -2$ ~~$b = -3$~~ ~~$b = 0$~~ $b = 5$

$b = -3$

$$\begin{aligned} 8 - 2(-3) &= -2 \\ 8 - (-6) &= -2 \\ 14 &\neq -2 \end{aligned}$$

$b = 0$

$$\begin{aligned} 8 - 2(0) &= -2 \\ 8 - 0 &= -2 \\ 8 &\neq -2 \end{aligned}$$

$b = 5$

$$\begin{aligned} 8 - 2(5) &= -2 \\ 8 - 10 &= -2 \\ \checkmark -2 &= -2 \end{aligned}$$