

WS:

Solving equations with Infinite and No Solutions
(Be careful, some of these have a solution!)

1.) $25t = 5(5t + 1)$

$$\begin{array}{r} 25t = 25t + 5 \\ -25t \quad -25t \\ \hline 0 = 5 \end{array}$$

No Solution \emptyset

2.) $7(2p + 1) = 14p + 7$

$$\begin{array}{r} 14p + 7 = 14p + 7 \\ -14p \quad -14p \\ \hline 7 = 7 \end{array}$$

All real numbers \mathbb{R}

3.) $-6x + 3 = 6x + 15$

$$\begin{array}{r} -6x + 3 = 6x + 15 \\ +6x \quad +6x \\ \hline 3 = 12x + 15 \\ -15 \quad -15 \\ \hline -12 = 12x \\ \frac{-12}{12} = \frac{12x}{12} \end{array}$$

$-1 = x$

4.) $3x + 6 = 3(2 + x)$

$$\begin{array}{r} 3x + 6 = 6 + 3x \\ -3x \quad -3x \\ \hline 6 = 6 \end{array}$$

All real numbers \mathbb{R}

5.) $8v = 2(4v + 2)$

$$\begin{array}{r} 8v = 8v + 4 \\ -8v \quad -8v \\ \hline 0 = 4 \end{array}$$

No solution \emptyset

6.) $2n - 6 = -8n + 14$

$$\begin{array}{r} 2n - 6 = -8n + 14 \\ +8n \quad +8n \\ \hline 10n - 6 = 14 \\ +6 \quad +6 \\ \hline 10n = 20 \\ \frac{10n}{10} = \frac{20}{10} \end{array}$$

$n = 2$

7.) $5t + 5 = 5t - 4$

$$\begin{array}{r} 5t + 5 = 5t - 4 \\ -5t \quad -5t \\ \hline 5 = -4 \end{array}$$

No solution \emptyset

8.) $16p + 8 = 2(8p + 4)$

$$\begin{array}{r} 16p + 8 = 16p + 8 \\ -16p \quad -16p \\ \hline 8 = 8 \end{array}$$

All real numbers
 \mathbb{R}