

# 8.4 Solving Equations Day 2

May 15, 2019 8:32 AM

Remember - when solving equations that have variables on the same side  $\Rightarrow$  Bedmas / group. When variables on the opposite sides  $\Rightarrow$  opposites!

Solve the following

1.  $3(5x + 3) = 2(3x + 18)$

$$\begin{array}{r} 15x + 9 \\ -6x \\ \hline 9x + 9 \end{array} = \begin{array}{r} 6x + 36 \\ -6x \\ \hline 36 \end{array}$$

$$\begin{array}{r} 9x + 9 \\ -9 \\ \hline 9x = 27 \end{array}$$

$$\begin{array}{r} 9x = 27 \\ \div 9 \\ \hline x = 3 \end{array}$$

$x = 3$

Brackets must be 'removed' using distribution

$$\begin{array}{r} 15x + 9 \\ -15x \\ \hline 9 \end{array} = \begin{array}{r} 6x + 36 \\ -15x \\ \hline -9x + 36 \end{array}$$

$$\begin{array}{r} 9 \\ -36 \\ \hline -27 \end{array} = \begin{array}{r} -9x + 36 \\ -36 \\ \hline -9x \end{array}$$

$$\begin{array}{r} -27 = -9x \\ \div -9 \\ \hline 3 = x \end{array}$$

$3 = x$

2.  $3(2.1b - 1.2) = 4(0.7b + 0.85)$

$$\begin{array}{r} 6.3b - 3.6 \\ -2.8b \\ \hline 3.5b - 3.6 \end{array} = \begin{array}{r} 2.8b + 3.4 \\ -2.8b \\ \hline 3.4 \end{array}$$

$$\begin{array}{r} 3.5b - 3.6 \\ + 3.6 \\ \hline 3.5b = 7 \end{array}$$

$$\begin{array}{r} 3.5b = 7 \\ \div 3.5 \\ \hline b = 2 \end{array}$$

$b = 2$