

# 8.3 Solving Equations

May 8, 2019 9:52 AM

Solve and Check:

coeff.  $\downarrow$  Last

a)  $2(x-1) = 8$

$$\begin{array}{r} \div 2 \\ 2(x-1) = 8 \\ \hline x-1 = 4 \\ +1 \quad +1 \end{array}$$

$x = 5$

SOLVE = SAMDEB

RS

$$2(x-1) = 8 \checkmark$$

$$\begin{array}{r} \downarrow \\ 2(5-1) \\ 2(4) \\ 8 \checkmark \end{array}$$

LS RS CHECK  $\rightarrow$  BEDMAS

b)  $-6 = 3(h+4)$

$$\begin{array}{r} \div 3 \quad \div 3 \\ -6 = 3(h+4) \\ \hline -2 = h+4 \\ -4 \quad -4 \end{array}$$

$-6 = h$

Negative coefficient  $\downarrow$  Multiplies to Brackets!!

$$\begin{array}{r} -6 = 3(h+4) \\ \checkmark \end{array}$$

$$\begin{array}{r} \downarrow \\ 3(-6+4) \\ 3(-2) \\ -6 \checkmark \end{array}$$

c)  $-4(x-0.6) = 3.2$

do NOT  $+4$

$$\begin{array}{r} \div -4 \\ -4(x-0.6) = 3.2 \\ \hline x-0.6 = -0.8 \\ +0.6 \quad +0.6 \end{array}$$

$x = -0.2$

RS

$$-4(x-0.6) = 3.2 \checkmark$$

$$\begin{array}{r} \downarrow \\ -4(-0.2-0.6) \\ -4(-0.8) \\ 3.2 \checkmark \end{array}$$

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d)  $\frac{3}{4}(x + \frac{1}{2}) = 6\frac{3}{8}$

$\div \frac{3}{4}$

$x + \frac{1}{2} = \frac{17}{2}$

$-\frac{1}{2}$

$x = \frac{16}{2} = 8$

$\frac{3}{4}(x + \frac{1}{2}) = 6\frac{3}{8} \checkmark$

$\frac{3}{4}(8 + \frac{1}{2})$

$\frac{3}{4}(8\frac{1}{2})$

$6\frac{3}{8} \checkmark$

NOTE THAT IT COULD HAVE BEEN :

$\frac{3}{4}(x + \frac{1}{2}) \Leftrightarrow \frac{3(x + \frac{1}{2})}{4}$

numerator of 1!

ex:  $\frac{x+7}{8} = 2\frac{1}{2}$   $\xrightarrow[\text{as}]{\text{same}}$   $\frac{1}{8}(x+7) = 2\frac{1}{2}$

$\frac{2(x-2)}{5} = 12$   $\xrightarrow[\text{as}]{\text{same}}$   $\frac{2}{5}(x-2) = 12$

e)  $\frac{d+1}{2} = \frac{3}{5}$

$\frac{1}{2}(d+1) = \frac{3}{5}$

$\div \frac{1}{2}$

$d+1 = \frac{6}{5}$

$-1$

$d = \frac{1}{5}$

Complete:

p 319 # 6, 8, 9

12, 14, 17, 18

All eqns  $\frac{3}{4}(x+1) = 5$