

8.2 Solving Equations

November-29-13

12:57 PM

Solving 2-step equations with fractions

isolate the variable in a 2-step equation

use the reverse order of operations

operation	opposite operation
+	-
-	+
x	÷
÷	x

Ex. #1

$$(a.) \quad 2x + \frac{1}{10} = \frac{3}{5} - \frac{1}{10}$$

$$- \frac{1}{10}$$

$$2x = \frac{3 \times 2}{5 \times 2} - \frac{1}{10}$$

$$2x = \frac{6}{10} - \frac{1}{10}$$

$$2x = \frac{5}{10}$$

$$(b.) \quad x - 2 = 8$$

$$\begin{array}{l} +2 \quad +2 \\ \hline x = 10 \end{array}$$

$$(c.) \quad 5x + 4 = -16$$

$$\begin{array}{l} -4 \quad -4 \\ \hline 5x = -20 \\ \hline 5 \quad 5 \\ \hline x = -4 \end{array}$$

$$2x = \frac{1}{10}$$

$$\frac{2x}{2} = \frac{1}{2} \div \left(\frac{2}{1}\right)$$

$$x = \frac{1}{2} \times \frac{1}{2}$$

$$x = \frac{1}{4}$$

$$x = -4$$

$$(d.) \quad 3x + 2 + 2x = 7$$

$$5x + 2 = 7$$

$$-2 \quad -2$$

$$5x = 5$$

$$x = 1$$

$$(e.) \quad \frac{k}{3} - \frac{1}{2} = -\frac{3}{4} + \frac{1}{2}$$

$$+ \frac{1}{2}$$

$$\frac{k}{3} = -\frac{7}{4} + \frac{1}{2}$$

$$\frac{k}{3} = -\frac{7}{4} + \frac{2}{4}$$

$$\frac{k}{3} = -\frac{5}{4} \times 3$$

$$k = -\frac{15}{4} = -3\frac{3}{4}$$

$$-\frac{1+3}{x4} = -\frac{7}{4}$$

pg. 311 # 7-15, 17, 18, 21, 22, 28-31