5 - 3
Multiply or Divide to Solve Equations

Still want to "undo" the operations, just like when we added/subtracted, but now we will multiply/divide.

Ex: $\frac{4x}{4} = \frac{48}{4}$

$X = 12$

Ex: $\frac{-126}{9} = \frac{9x}{9}$

$-14 = x$

Ex: $\frac{3}{1} \cdot \frac{x}{3} = 11 \cdot 3$

$X = 33$

Ex: $36 = -\frac{x}{4}$

$-4 \cdot 36 = \frac{x}{-4} \cdot -4$

$-144 = x$

reciprocals: two numbers whose product is 1 (×)

Ex: 4 and $\frac{1}{4}$ $\quad \frac{4}{1} \cdot \frac{1}{4} = \frac{4}{4} = 1$

Ex: $\frac{2}{3}$ and $\frac{3}{2}$

Find the reciprocal of...

a.) $\frac{1}{3}$ $\frac{3}{1}$ 3

b.) $\frac{5}{2}$ $\frac{2}{5}$

c.) $\frac{-2}{1}$ $\frac{1}{-2}$

Ex: $\frac{5}{2} \cdot \frac{2}{5} y = \frac{6}{1} \cdot \frac{5}{2}$

$y = \frac{30}{2}$

$y = 15$

Ex: $8 = \frac{3}{4} \cdot \frac{4}{3} x$

$\frac{3}{4} \cdot \frac{8}{1}$

$$\frac{24}{4} = x$$

$$6 = x$$

Homework:

5-3 WS (odds)