

Warm Up: Simplify

$$\begin{aligned} & (-5-7) + [-2 - (-7)] \rightarrow (-2+7) \\ & = (-12) + (5) \leftarrow \\ & = -7 \end{aligned}$$

$$\begin{aligned} & (-8)(3) + 12 \div (-6) \\ & = -24 + (-2) \\ & = -26 \end{aligned}$$

$$\begin{aligned} & \left(\frac{1}{2} + \frac{1}{3}\right) \div \left(\frac{1}{4} \div \frac{1}{3}\right) \\ & = \left(\frac{1}{2} + \frac{1}{3}\right) \div \left(\frac{1}{4} \times \frac{3}{1}\right) \\ & = \left(\frac{1}{2} + \frac{1}{3}\right) \div \frac{3}{4} \\ & = \left(\frac{3}{6} + \frac{2}{6}\right) \div \frac{3}{4} \\ & = \frac{5}{6} \div \frac{3}{4} \\ & = \frac{5}{6} \times \frac{4}{3} \\ & = \frac{20}{18} \\ & = \frac{10}{9} \end{aligned}$$

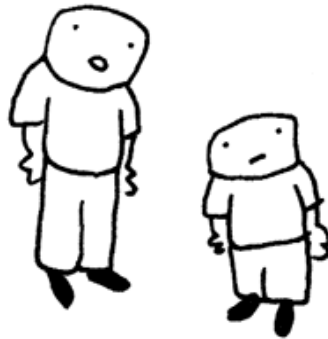
$$\begin{aligned} & -\left(\frac{-15}{10}\right) \\ & = -1 \times \left(\frac{-15}{10}\right) \\ & = \frac{15}{10} \Rightarrow \frac{3}{2} \end{aligned}$$

$$\begin{aligned} & \frac{9}{10} \times 20 \div \frac{1}{3} \\ & = \frac{9}{10} \times \frac{20}{1} \div \frac{1}{3} \end{aligned}$$

$$\begin{aligned} & = \frac{180}{10} \div \frac{1}{3} \\ & = \frac{180}{10} \times \frac{3}{1} \\ & = \frac{540}{10} \\ & = 54 \end{aligned}$$

## 0.3 Review

# Solving Linear Equations

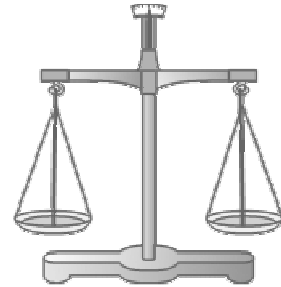


well, son, it's a  
simple equation.  
 $x$  equals you, and  
 $x$  also equals  
grounded

ABC

Use opposite operations and Backwards BEDMAS  
To isolate your variable

**Always** keep the equation balanced!  
Whatever is done to one side must be  
done to the other



Ex. Solve:

a)  $x + 4 = 14$

$$x + 4 - 4 = 14 - 4$$

$$x = 10$$

b)  $5y = 35$

$$y = \frac{35}{5}$$

$$y = 7$$

c)  $b - 8 = -12$

$$b = -12 + 8$$

$$= -4$$

d)  $3x + 2 = x + 7$

$$3x + 2 - x = x + 7 - x$$

*cancel*

$$2x + 2 = 7$$

$$2x = 5$$

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

e)  $\frac{x}{4} = 7$

$$x = 7 \cdot 4$$

$$= 28$$

f)  $2k + 3 = 4k - 5$

$$2k - 4k + 3 = -5$$

$$-2k = -8$$

$$k = 4$$

g)  $3x - x + 4 = 0$

$$2x = -4$$

$$x = -\frac{4}{2}$$

$$x = -2$$

h)  $8 - (2g + 3) = 3g - 5$

$$8 - 2g - 3 = 3g - 5$$

$$8 - 2g = 3g - 5 + 3$$

$$-2g = 3g - 5 + 3 - 8$$

$$-5g = -10$$

$$g = 2$$

i)  $2(d + 6) = 9(d - 1)$

$$2d + 12 = 9d - 9$$

$$12 + 9 = 9d - 2d$$

$$21 = 7d$$

$$\frac{21}{7} = d$$

$$3 = d$$

j)  $\frac{x}{4} = \frac{3}{5}$

$$x = 4 \times \frac{3}{5}$$

$$x = \frac{12}{5}$$

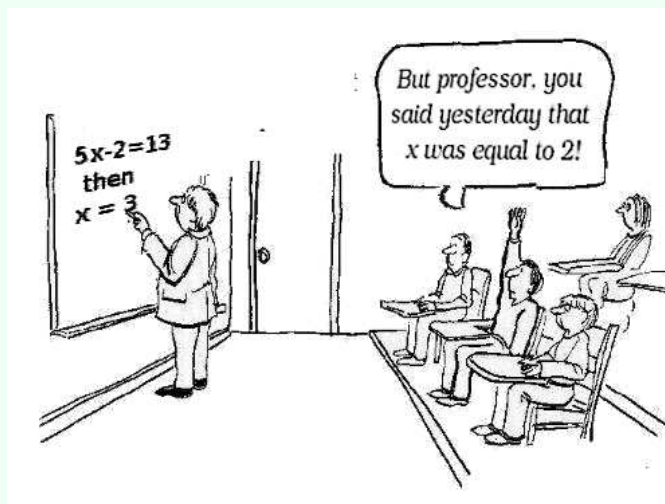
k)  $\frac{5}{x} = \frac{7}{2}$

**Challenge**

l)  $\frac{x-2}{3} + 5 = \frac{4x-1}{2}$

**Practice Time...**

Solving Linear  
Equations Handout



ABC