Mixture Problems

Example:

The instructions on a can of powdered drink mix say to mix 1/4 cup of the mix with 2 quarts of water. How much of the mix should be used with 1 1/2 gallons of water?

Let x = # of cups of the drink mix to use

$$\frac{1/4}{2} = \frac{x}{6}$$

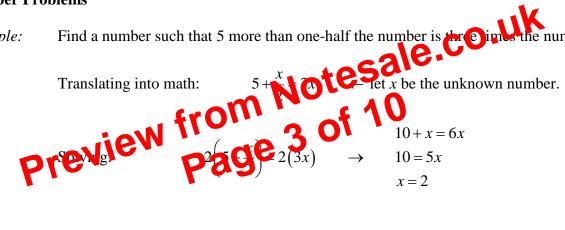
$$6\left(\frac{1}{4}\right) = 2x$$

$$\frac{3}{2} = 2x$$

$$x = \frac{3}{4}$$
 cup of the drink mix

Number Problems

Example:



$$10 + x = 6x$$

$$10 = 5x$$

$$x = 2$$

Percent of Problems

Example:

The price of gasoline increased by 25% between January and March. If the price per gallon in March was \$1.15, what was the price per gallon in January?

To find the price in March: Price in January +25% increase in cost = Price in March

Let: price per gallon in January = x25% increase in cost = 0.25x

price in March = 1.15

Then x + 0.25x = 1.15

1.25x = 1.15

x = \$0.92