

Lesson 11 : Word Questions  
Involving Fractions

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Addition

- in addition to
- added to
- + and ... and
- combined with
- a deposit
- a profit
- he or she earns
- a gain
- an increase
- a raise
- in total

Subtraction

- we withdraw
- less
- subtracted from
- decreased by
- how much remains?
- a decrease
- is missing
- he or she pays
- a debit
- a loss
- reduced by
- he or she gives
- he or she loses

Multiplication

- $\frac{2}{3}$  of a quantity
- $\frac{4}{5}$  of a quantity
- times
- for each
- by
- multiplied by
- the product of

Division

- are found in
- is contained in
- how many ... are there in ...?
- ~~for each~~
- how many times does ... go into ...?
- in how many parts?
- split stng  
 (cost)  
 (debt)

• distance between  
 • difference in  
 $d = |x_2 - x_1|$

Give the tip about units!

And write the units more at 1st.

sometimes key words are explicit or implicit

↳ stated clearly

↳ not stated clearly  
↳ hinted  
↳ implied

Pg 12.9

#1: There are 45 students.  
"4/9 of the group are girls"  
"Of this group, 1/9 are girls."

How many boys are there?

1. key words

"are there in ...?"

(-) / how many ... remains. "remains"? check if implicit key word makes sense.  
(# of boys)  
x 1 4/9 of

2. series of operation → sometimes use of brackets is important

total #

of boys =

$$\text{total \# of students} - \text{\# of girls}$$

write out

formulas!!

$$45 - \frac{4}{9} \times 45$$

3. (optional) (useful cuz fractions)

$$45 - \frac{1}{2} \times 45$$

$$45 - 22.5$$

$$22.5$$

$$4. \quad 45 - \frac{4}{9} \times \underline{45}$$

$$45 - \frac{4 \times 45}{9 \times 1}$$

$$45 - 20$$

25 boys

B  
E  
D  
M  
A  
S

5. Verify reasonableness ✓

6. ∴ there are 25 boys (check)

Do another example from book where the fractions have units unlike the previous example where you therefore had to multiply !