

Pg. 102

Today we are looking at how to change a word problem into an equation. Often times we do this in our heads without even thinking about what the equation or sum is.

E.g. Seán has 15 sweets, he eats 10 how many has he left? Ans = 5

You can nearly figure out the answer is 5 in your head. But what have you actually done?

Well I know left means subtract. I also know he had 15 to start with so he is subtracting 10 by eating them and will have 5 left over in the end.

$$15 - 10 = 5$$

Some of the word problems will have two steps

E.g. Carol had €2.50 going to the shop. She lost 50c on the way. At the shop she bought an ice-cream for €1.20. How much has she left?

The first part of my sum tells me that Carol had €2.50 and she lost 50c. Lost means subtract so the start of my sum is €2.50 – €0.50

She then went to the shop and bought an ice-cream for €1.20. Buying something means she's taking away or subtracting more money so I subtract another €1.20.

Now my sum looks like this: €2.50 - €0.50 - €1.20 = \_\_\_\_\_

It's a bit confusing looking isn't it? I need to keep the two parts of my sum separate, I can do this using brackets:

$$(\text{€}2.50 - \text{€}0.50) - \text{€}1.20 = \underline{\hspace{2cm}}$$

That looks much better doesn't it! My rule is always do the brackets first so let's see:

$$(\text{€}2.50 - \text{€}0.50) - \text{€}1.20 = \underline{\hspace{2cm}}$$

Let's do the brackets-  $\text{€}2.50 - \text{€}0.50 = \text{€}2.00$

$$\text{€}2.00 - \text{€}1.20 = \text{€}0.80$$

Sometimes the story will give you all the information for the equation.

E.g. Ms Condron walks 4km three times a week. That's a total of 12km each week.

I know that times means multiply so I multiply the 4km she walks by 3 as she does it 3 times.  $4\text{km} \times 3$

To finish my equation they have already worked out my answer which is 12km, so I just add that to the end:

$$4\text{km} \times 3 = 12\text{km}$$

There's a list of key words on the next page to help you write your equations.

# Key Words

Key words can help us solve mathematical word problems.



## Addition

add  
add to, added to  
addition of  
all together  
altogether  
and

both  
combined  
extra  
in all  
increase by  
increased by

join  
more, more than  
plus  
sum  
together  
total, total of



## Subtraction

decrease, decreased  
deduct  
difference  
difference between  
dropped, fell  
fewer, fewer than

how much less  
how many more  
how much more  
how many left  
how much left  
less, less than

minus  
nearer, further  
reduce, reduced by  
remaining  
subtract  
take away



## Multiplication

area of  
at  
by  
double, doubled  
each had  
groups of

multiplied by  
of  
multiple  
per  
product, product of  
rate

rows of  
sets of  
times  
triple  
twice



## Division

divide evenly  
divided by  
equal parts  
equal pieces  
fraction

for each  
half, quarter  
how many each  
out of  
per  
percent, percentage

quotient  
ratio, ratio of  
share, share of  
shared between  
shared equally  
split



## Equals

answer  
are  
corresponds to  
equals  
equates to

gives  
is, is equal to  
makes  
produces  
product is

results in, result is  
same amount  
same as  
same value  
yields

The second part of the page asks you to write your own story or word problem for each equation.

E.g.  $3 \times 7 = 21$

I can choose to write a word problem on anything.

- Firstly I look at the operation in my equation, because it's multiply I can use words like times or product or rows. I'm going to use rows, like rows of cabbages on a farm.
- Next I look at how many cabbages I'll have in each row: 3
- And now how many rows I'll have : 7
- Let's write the word problem:

A farmer grows three cabbages in each row. He has seven rows in his field. He has 21 cabbages growing in his field.

E.g.  $34 - 8 = 26$

- Straight away I look at my operation and I see it's subtract so I can use words like take away, less than, minus. I'm going to use less than.
- Next I look at what number I had at the start : 34
- And now how many I had to subtract : 8
- Finally how many will I have at the end? 26
- Let's write the word problem:

Molly has 34 Sharpie markers. Her friend Sarah has 8 less than her. Sarah has 26 Sharpies.

These videos will help explain further if you need it:

<https://www.youtube.com/watch?v=laLVwIE28Sw> Multiplication stories

<https://www.youtube.com/watch?v=cYIXfpfP01Y> Division stories