

Understand it!

Numbers can be broken apart and combined in many ways.

Using Mental Strategies to Add and Subtract

How can you use mental strategies to add and subtract?

How many years have Ms Walston and Mr Randall been teaching?

What is the total number of years all of the teachers

in the chart have been teaching?

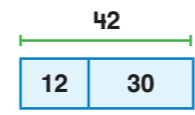
Properties can sometimes help you add when using mental maths.

Teacher	Years Teaching
Ms Walston	12
Mr Roy	5
Mr Randall	30



Commutative Property of Addition

You can add two numbers in any order. Use this bar diagram to help you.



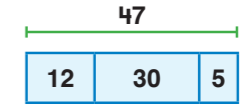
$$12 + 30 = 30 + 12$$

Ms Walston and Mr Randall have been teaching a combined total of 42 years.



Associative Property of Addition

You can change the grouping of addends.



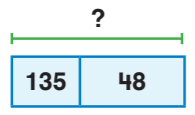
$$(12 + 30) + 5 = 12 + (30 + 5)$$

The total number of years the three teachers have been teaching is 47 years.

Another Example

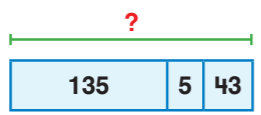
Add using mental maths

Find $135 + 48$.



Partition numbers to make it easier.

Add 5 to 135, then add 43.



Another way to do this is to use compensation.

$$135 + 48$$

$$135 + 50 = 185$$

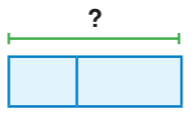
I added 2 extra, so I will subtract 2.

$$185 - 2 = 183$$

So, $135 + 48 = 183$.

Subtract using mental maths

Find $400 - 165$.



$$165 + 5 = 170$$

$$170 + 30 = 200$$

$$200 + 200 = 400$$

$$5 + 30 + 200 = 235$$

So, $400 - 165 = 235$.

$$260 - 17 = \square$$

It is easier to subtract 20 from 260.

$$260 - 20 = 240$$

I subtracted 3 extra, so I will add 3.

$$240 + 3 = 243$$

So, $260 - 17 = 243$.

