



Mini-task: Which operation? (1)

Choosing the right calculation

Q 1. Changing questions in words into calculations

Write a calculation to go with each of the situations given in the table below:

The first one has been done for you as an example

Situation	Calculation
I have £200 and then receive £10	£200 +£10
An item costs £90; then the price goes up by £30	
The workers in a factory get a £45 wage cut. What is the new wage of workers who used to earn £400?	
Three friends share £90 winnings between them	
A shop doubles all its prices. What is the price of an item that cost £35 before?	
I pay off £300 from a debt of £1 200	
I have £430 in my account; then I save another £120	
A meal costs £25 per person. How much will it cost in total for a group of 4 people?	
I divide my garden into two equal sized flower beds. The garden is 4 m long. How long is each bed?	

Q 2. Decide what calculation(s) you need to do in each of these to work out the answer(s):

Tina is making some shelves to go in the alcove in her study.
The alcove is 150 cm wide and Tina wants to put up 2 shelves.
What length of wood does she need altogether?

Tina buys a length of wood 350 cm long.
After she makes the first shelf, how much wood will she have left?

How much will she have left after she has made both shelves?

Su Ling goes shopping. She spends £3.55 in the first shop she goes to, and £14.95 in the next.
How much has she spent in total?

If she set off with £20, how much should she have left after her shopping trip?

Shelley wants to save up for a holiday.
She already has £120 and then saves another £60. How much does this make her savings so far?

She decides to put aside a regular amount from her wages.
She saves £25 a week over the next 8 weeks.
How much has she saved at the end of these 8 weeks?

How much does this make her savings altogether now?

Ramon is putting in a new kitchen. The length of work surface he needs is 120 cm on one side of the cooker and 260 cm on the other side.
The surface Ramon chooses comes in lengths of 210 cm, 360 cm or 420 cm.
Which of these lengths does Ramon need to buy?

Four friends go out for a meal together. The restaurant bill comes to £84 altogether. How much will it cost each friend if they share the cost equally?
They get a taxi home costing £4.80. How much is this divided between them?

Underline or highlight any words in each example that give a clue about whether you need to add (+), subtract (-), multiply (x) or divide (÷)

Q 3. Think of other words that might indicate each of the operations (+ - x ÷):

Make a list for each of the four operations.

Addition:	Subtraction:
Multiplication:	Division:

Q 4. Sometimes details are included that you don't need in order to work out the answer.

In each example below, underline or highlight any *details that are not important for the calculation you need to make:*

Tina is making some shelves to go in her bedroom.
She decides to use wood that is 2 cm thick and 20 cm deep for the shelves.
She wants to put up 3 shelves, each 120 cm wide.
What length of wood does she need altogether?

Su Ling goes shopping. She spends £6.55 in the first shop that she goes to. In the next shop she visits, she gets some items in a sale reduced from £16.99 to only £5. How much has she spent in total?

If she set off with £20, how much should she have left after her shopping trip?

Shelley wants to save up for a holiday.

She earns £270 a week and decides to put aside a regular amount of £30 a week from her wages over the next 10 weeks.

How much has she saved at the end of the 10 weeks?

She sees a holiday at the resort she wants to go to, which is on offer at 25% off and now costs £360.

How much additional money does she need to save up to afford this holiday?

Ramon is putting in a new kitchen. He has already bought the cooker, which is 65cm wide. The space on one side of the cooker is 100 cm and on the other side is 250 cm.

How many units 50 cm wide will fit on each side of the cooker?

Three friends go out for a meal together. The restaurant bill comes to £93 altogether, including a service charge of 10%.

How much will it cost each friend if they share the cost equally?

They get a taxi home costing £9.00. How much is this divided between them?

Which operation? Answer sheet

Q 1. The calculations that go with these questions in words are:

Situation	Calculation
I have £200 and then receive £10	$£200 + £10$
An item costs £90; then the price goes up by £30	$£90 + £30$
The workers in a factory get a £45 wage cut. What is the new wage of workers who used to earn £400?	$£400 - £45$
Three friends share £90 winnings between them	$£90 \div 3$
A shop doubles all its prices. What is the price of an item that cost £35 before?	$£35 \times 2$
I pay off £300 from a debt of £1 200	$£1\ 200 - £300$
I have £430 in my account; then I save another £120	$£430 + £120$
A meal costs £25 per person. How much will it cost in total for a group of 4 people?	$£25 \times 4$
I divide my garden into two equal sized flower beds. The garden is 4 m long. How long is each bed?	$4m \div 2$ (or $\frac{1}{2} \times 4m$)

Q 2. The calculation(s) needed to work out the answer in each case are:

2 shelves @ 150 cm each:	150×2	OR	$150 + 150$	(300 cm)
After the first shelf:	$350 - 150$			
After both shelves:	$350 - 150 - 150$	OR	$350 - 300$	

Total spent:	$£3.55 + £14.95$	(£18.50)
Money left after trip:	$£20 - £18.50$	

Savings so far:	$£120 + £60$	(£180)
Regular savings in 8 week period:	$£25 \times 8$	(£200)
Savings altogether:	$£180 + £200$	

Work surface needed:	$120 + 260$	(380)
Ramon will need to buy the 420 cm length.		

Cost for each friend:	$£84 \div 4$
Taxi home:	$£4.80 \div 4$

Q 3. Some words that might give clues about each of the operations include:

Addition: <i>and plus more extra</i> <i>total altogether increased by</i>	Subtraction: <i>minus less reduced by</i> <i>off left</i>
Multiplication: <i>times @ each by</i>	Division: <i>shared divided equally between</i> <i>each</i>

There are many others. Notice them as you come across them and add them to your lists.

Q 4. The information not needed in each example is:

Scenario:

Surplus information:

Tina	<i>She decides to use wood that is 2 cm thick and 20 cm deep for the shelves.</i>
Su Ling	<i>... she gets some items in a sale reduced from £16.99 ...</i>
Shelley	<i>She earns £270 a week</i> <i>... which is on offer at 25% off ...</i>
Ramon	<i>He has already bought the cooker which is 65cm wide.</i>
Friends meal	<i>... including a service charge of 10%.</i>