

2.2.21

Arithmetic

1.  $\frac{2}{5} \times \frac{3}{4}$

4.  $\frac{2}{7} \div 6$

2.  $\frac{2}{5} + \frac{2}{3}$

5.  $\frac{1}{3} \times 8$

3.  $\frac{3}{4} - \frac{1}{3}$

6.  $\frac{4}{5} + \frac{1}{2}$

FB4

Flashback 4

Year 6 | Week 4 | Day 4



- 1) Work out 10% of 160
- 2) Write 65% as a decimal.
- 3) Simplify  $\frac{25}{30}$
- 4) The sides of a square are 7 cm.  
Work out the area of the square.

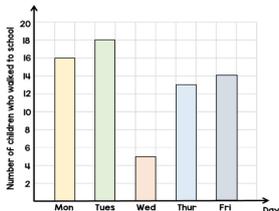


Problems of the Day

Problems of the Day 2020

Day 7

1 There are 25 children in a class. The bar chart shows the number of children in the class who walk to school each day.



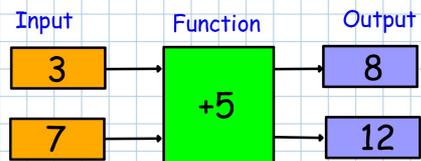
- (a) What percentage of the class walked to school on Thursday? Explain to your friend.
- (b) One of the days it rained. Which day do you think it was? Explain to your friend.

2 Order the following numbers. Start with the smallest.

3.1     $\frac{18}{5}$      $3\frac{1}{4}$

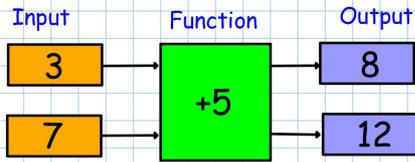


Function machines with one step



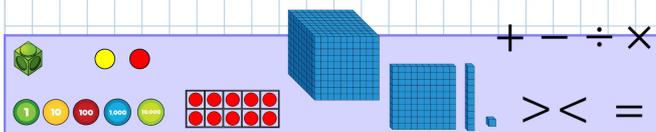
This is a one step function machine. It has one step (+5) on the input to produce the output.

## Function machines with one step

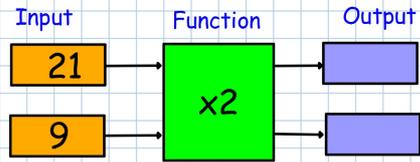


We could also show the same rule within a table

Function	Input	3	7
+5	Output	8	12



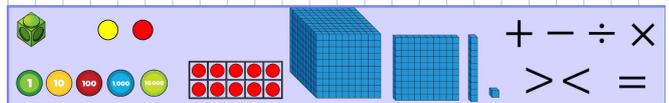
## To calculate the output



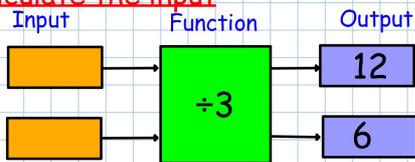
We can work out the outputs if we have the inputs and a function

Function	Input	21	9
x2	Output		

To calculate the output, take the input and carry out the function (x)  
 $21 \times 2 = 42$   
 $9 \times 2 = 18$



## To calculate the input



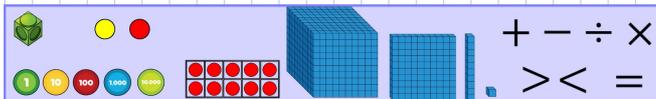
Function	Input	12	6
÷3	Output		

To calculate the input, take the out and carry out the INVERSE of the function.  
 AS THE FUNCTION IS DIVIDE BY 3, WE HAVE TO DO THE INVERSE WHICH IS MULTIPLY BY 3.

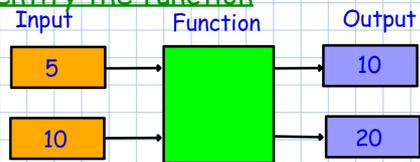
$$12 \times 3 = 36$$

$$6 \times 3 = 18$$

We can then put the inputs in  $36 \div 3 = 12$   
 and see if it is correct.  $18 \div 3 = 6$



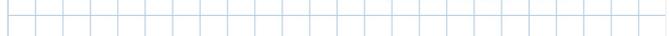
## To identify the function



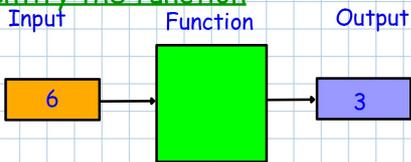
We can work out the function if we have inputs and outputs. We just need to see what happens to the numbers.

1. Look at the outputs and compare to the inputs.
2. The output has become bigger than the input (this probably means the function is addition or multiplication).
3. If we look at the difference between the input and output in the first example it is 5 (10-5).
4. For the second example, the difference is 10 (20-10) so we aren't adding the same amount each time.
5. We are now thinking about multiplication. What do we multiply 5 by to get 10, and 10 by to get 20?

FUNCTION = x2



## To identify the function



If we don't have enough examples of inputs and outputs, we can't be certain that we know what the function is.

In the example above, the function could be  $-3$  or  $\div 2$

$$6 - 3 = 3$$

$$6 \div 2 = 3$$

## 2.2.21

### Find a rule - one step

#### Vocabulary

- algebra
- function
- input
- output
- one-step

## 2.2.21 Find a rule - one step

Today we are learning to find a rule to explain an input and output relationship.

I will be successful if:

- I recognise what the input and output of the machine is.
- I know how to apply the function to the input.
- I recognise the effect of the function on the input.
- I can work 'backwards' from the output (and use the function) to find the input.

## 2.2.21

### Plenary

True or False?

True or False? Find a rule - one step

If the input changes then the output changes but the function remains the same.

