

## What should I already know?

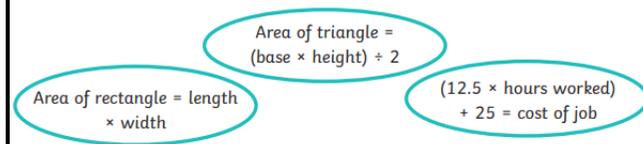
- I know how to use a bar model to show a missing number calculation involving addition, subtraction, multiplication or division.
- I know some simple formula such as we can find the area of a rectangle by multiply the length by the width.
- I can solve correspondence problems.
- I can count forwards and backwards in a given number.

## Key Vocabulary and definitions

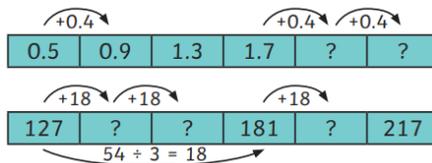
<b>algebra</b>	When letters and other symbols are used to represent numbers and quantities in formulae and equations.
<b>variable</b>	An unknown number.
<b>expression</b>	A string of numbers and letters joined together by mathematical operations is called an <b>algebraic expression</b> .
<b>formulae</b>	A formula is a <b>rule</b> . A formula can be given in words or using letters and symbols.
<b>term</b>	Each number in a linear number sequence.
<b>equation</b>	An equation has two parts separated by an equals sign. Both sides of an equation are equal.
<b>substitution</b>	When we replace letters with numbers in an algebraic expression in order to find missing values.
<b>enumerate</b>	Making a complete list of answers to a problem.

## Key Knowledge

### Use simple formulae



### Generate and describe linear number sequences



### Express missing number problems algebraically

Add 14 to a	$a + 14$	$a + 14 = 20$	An equation is a number statement with an equal sign (=). Expressions on either side of the equal sign are of equal value.
Subtract 20 from b	$b - 20$	$b - 20 = 15$	
Multiply c by 4	$4c$	$4c = 28$	
12 more than d	$d + 12$	$d + 12 = 30$	
Multiply e by 3 and subtract 5	$3e - 5$	$3e - 5 = 10$	

$2(f + 12) = 44$   
Add 12 to f and then multiply by 2

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input  f  →  +12  →  ×2  →  output  44
    
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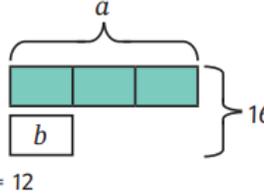
### Find pairs of numbers that satisfy an equation with two unknowns

$2a + b = 10$

a	b
2	6
3	4
4	2
5	0

$a + b = 16$   
 $a = 3b$

$a + b = 16$   
 $3b + b = 16$   
 $4b = 16$   
 $b = 4$  and  $a = 12$



### Enumerate possibilities of combinations of two variables.

- Enumerating means making a complete list of answers to a problem.
- Use a system for finding the possibilities.
  - Organise your findings in an ordered list or table.
  - Have a way of deciding when all possibilities have been found.

There are four ice cream flavours.



Two scoops of two different flavours give six possible combinations.

• chocolate and strawberry	• strawberry and vanilla
• chocolate and vanilla	• strawberry and mint
• chocolate and mint	• vanilla and mint