

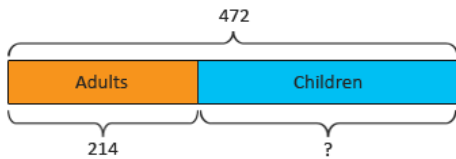
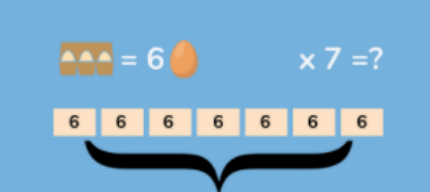
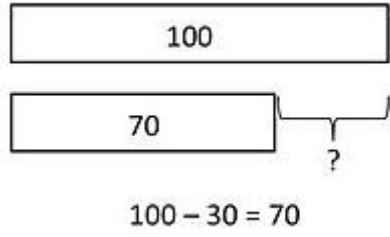
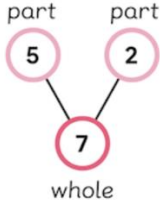
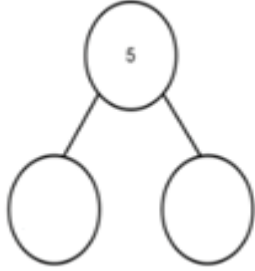








































































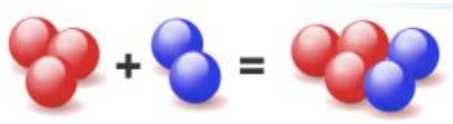
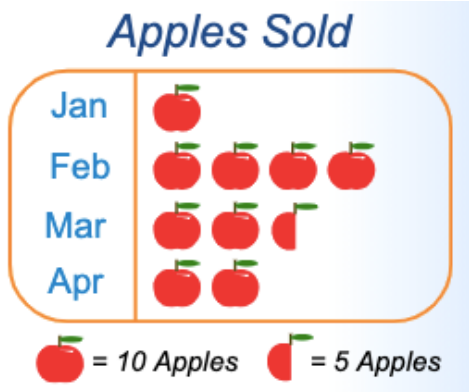
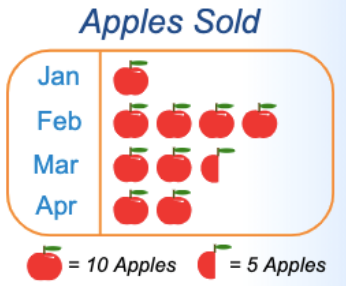
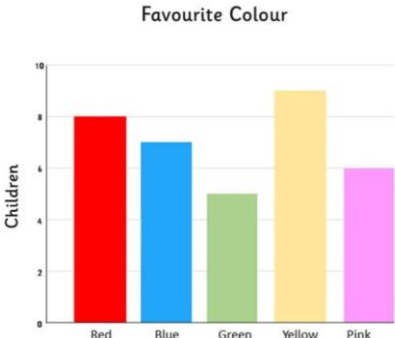
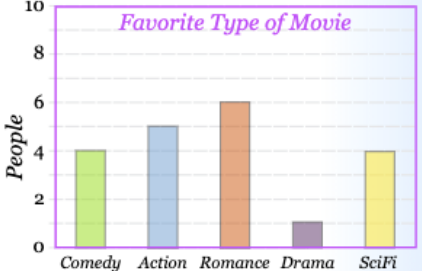


Power Maths Key Vocabulary
Year 3 – Block B

Key Vocabulary	Explanation of Terms	Example Question(s)
multiply	<p>To multiply means to add equal groups. When we multiply, the number of things in the group increases.</p> <p>The basic idea of multiplying is repeated addition:</p> <p>5 multiplied by 3 is the same as 5 + 5 + 5.</p>	<p>Calculate 6 multiplied by 9. (6 x 9 = 54)</p> <p>Michael needs 25 eggs for a wedding. He buys 5 boxes of 6, will this be enough? (6 x 5 = 30 – yes)</p> <p>Andrew is having his friends over for game night. So he decided to prepare snacks and games. He started by making mini sandwiches. If he has 4 friends coming over and he made 3 sandwiches for each one of them, how many sandwiches did he make? (4 x 3 = 12)</p>
divide	<p>To divide is to separate or be separated into equal parts.</p> <p>Division is the act or process of dividing anything.</p> $8 \div 2 = 4$ <p>8 divided into 2 groups gives a result of 4 per group</p>	<p>There are 9 chocolates, if I share these equally between 3 people, how many sweets will each person get? (9 ÷ 3 = 3)</p> <p>Tia shares out 28 rubies equally between 2 chests. How many rubies will be in each chest? (28 ÷ 2 = 14)</p>
add	<p>To add is to bring two or more numbers (or things) together to make a combined total.</p>	<p>Add 41 and 22. (41 + 22 = 63)</p> <p>Michael has 6 oranges and 89 pears, how many pieces of fruit does he have in total? (89 + 6 = 95)</p>

<p>subtract</p>	<p>To subtract is to take one number away from another.</p> 	<p>If I have 5 apples and then eat 2 how many would we be left with?</p>  <p>There are 100 sweets in a box – Carla eats 11 sweets, how many remain in the box? (100 – 11 = 89)</p>
<p>bar model</p>	<p>A bar model is a pictorial representation of a problem or concept where bars or boxes are used to represent the known and unknown quantities.</p>  <p>Bar models are most often used to solve number problems with the four operations – addition, subtraction, multiplication and division.</p>	<p>Egg boxes can hold 6 eggs, we need to fill 7 boxes. How many eggs will we need? (42)</p>  <p>100 children go on a school trip. 70 children see the camels at the zoo. How many children do not see the camels?</p> 
<p>part whole model</p>	<p>A part whole model is a concept illustrating how numbers can be split into parts. Children using this model will see the relationship between the whole number and the component parts, this helps learners make the connections between addition and subtraction.</p> 	<p>Using part whole models, show how 5 can be partitioned.</p>  <p>How many different ways could you partition 100?</p>
<p>partition</p>	<p>Partitioning is used to make solving maths problems involving large numbers easier by separating them into smaller units. By using</p>	<p>How can the following numbers be partitioned?</p> <ol style="list-style-type: none"> 1) 45 (40, 5) 2) 78 (70, 8)

	<p>partitioning, it helps students to understand the values of each digit.</p> <p>When asked to calculate $567 + 199$:</p> <div style="border: 1px solid orange; padding: 5px; width: fit-content; margin: 10px auto;"> <p style="text-align: center; color: #00A0C0; font-weight: bold;">Partitioning method</p> <p style="text-align: center; color: #E67E22;">$500 + 100 = 600$</p> <p style="text-align: center; color: #E67E22;">$60 + 90 = 150$</p> <p style="text-align: center; color: #E67E22;">$7 + 9 = 16$</p> <p style="text-align: center; color: #E67E22;">$600 + 150 + 16 = 766$</p> </div>	<p>3) 123 (100, 20, 3)</p> <p>Use partitioning to solve the following questions:</p> <ol style="list-style-type: none"> 1) $45 + 28$ (173) 2) $123 + 49$ (172) 																												
<p>multi-step</p>	<p>Multi-step problems refer to problems that require more than one calculation to solve.</p>	<p>Sara has 3 sweets, her friend has double the amount of sweets, how many sweets do they have altogether?</p> <p>Calculation 1: Find out how many sweets her friend has. ($3 \times 2 = 6$)</p> <p>Calculation 2: Add Sara's sweets to her friends to find the total. ($3 + 6 = 9$)</p> <p>Answer: 9 sweets in total.</p>																												
<p>pounds (£) and pence (p)</p>	<p>Pounds and pence (pennies) are forms of the British currency. There are 100 pennies (100p) in 1 pound (£1).</p> <table border="1" style="width: 100%; text-align: center; font-size: small;"> <tr> <td style="writing-mode: vertical-rl; transform: rotate(180deg);">Pence</td> <td> 1p</td> <td> 2p</td> <td> 5p</td> <td> 10p</td> <td> 20p</td> <td> 50p</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td style="writing-mode: vertical-rl; transform: rotate(180deg);">Pounds</td> <td> £1</td> <td> £2</td> <td> £5</td> <td> £10</td> <td> £20</td> <td> £50</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>	Pence	 1p	 2p	 5p	 10p	 20p	 50p								Pounds	 £1	 £2	 £5	 £10	 £20	 £50								<p>Jon has 400p, how many pounds does he have? (£4)</p> <p>Dave has £6 and 40p, how many pennies does he have in total? (640p)</p>
Pence	 1p	 2p	 5p	 10p	 20p	 50p																								
																														
Pounds	 £1	 £2	 £5	 £10	 £20	 £50																								
																														
<p>total</p>	<p>Total is the whole amount, the result of adding smaller amounts together.</p> <div style="text-align: center; margin: 10px 0;">  </div>	<p>John has 3 marbles and Jenny has 10 marbles, how many marbles do they have in total? ($10 + 3 = 13$)</p> <p>Clare has £27 and Mark has £7, how much money do they have in total? ($£27 + £7 = £34$)</p>																												
<p>difference</p>	<p>To find the difference we subtract one number from another. We are finding how much one number differs from another.</p> <div style="text-align: center; margin: 10px 0;"> <p>Subtraction:</p> <p style="font-size: 2em; color: #00A0C0;">$8 - 3 = 5$</p> <p style="color: #E67E22; font-size: 1.5em;">↘ Difference</p> </div>	<p>What is the difference between 20 and 7? ($20 - 7 = 13$)</p> <p>Jack has £22 and Sam has £13, what is the difference between these amounts? ($£22 - £13 = £9$)</p>																												

<p>change</p>	<p>Change is the balance of money due after paying for an item with a value of money higher than the cost of the item.</p> <p>It can be found by calculating the difference between the paid amount and the value of the item.</p>	<p>Habiba pays for a 20p lollipop with a 50p coin, how much change will she get? (50p – 20p = 30p)</p> <p>I buy a pizza costing £1.20. I pay with a £10 note. How much change do I get?</p>
<p>pictogram</p> <p>key</p>	<p>A pictogram uses pictures or symbols to show the value of data.</p> <p>The key tells us what each picture / symbol is worth.</p>  <p>They key tells us that 1 whole apple is worth 10 apples, and half an apple is worth 5 apples.</p>	 <p>How many apples were sold in April and January? (30)</p> <p>How many more apples were sold in February than April? (20)</p>
<p>bar chart</p>	<p>A bar chart is a graph drawn using rectangular bars to show how large each value is.</p> <p>The bars can be horizontal or vertical.</p>  <p>One axis shows the topics being studied and the other shows the measure.</p>	<p>The bar chart below shows people's favourite type of movie.</p>  <ol style="list-style-type: none"> How many people chose comedy as their favourite movie? (4) What was the least popular type of movie (Drama) How many more people chose action than comedy? (1)
<p>table</p> <p>row</p> <p>column</p>	<p>A table is used to arrange information in rows and columns.</p> <p>Rows go across the page and columns go up and down.</p>	<p>Use the information in the table below to answer the following questions:</p>

Sport	People
Soccer	106
Tennis	45
Gymnastics	54
Swimming	82
Track	68

Type of Pet	Tally	Frequency
Dog	### ##	12
Cat	###	7
Goldfish	###	6
Budgie		3
Hamster		2
Lizard		1
Snake		1
Rabbit		3

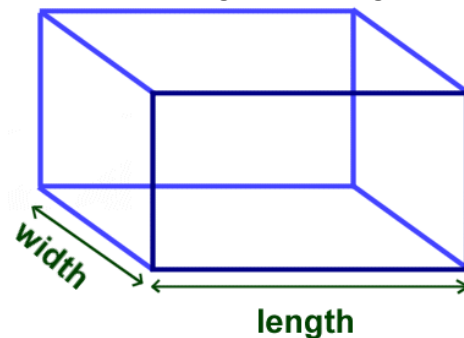
- 1) What information could this table be presenting?
- 2) How many children chose a hamster?
- 3) How many children chose a rabbit or a dog?
- 4) How many rows are in the table?
- 5) How many columns does this table have?

length

width

Length measures how far it is from one end to another, or from one point to another. The length of an object is the greatest of the two or three dimensions of an object.

Width is similar to length; the distance from side to side. This is the shorter side while the length is the longer side.



Using a ruler, measure the length and width of this rectangle.



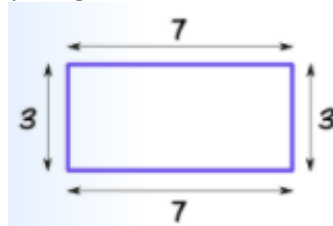
The length of a square is 5cm. what will the perimeter of the square be? (All sides of a square are the same so $5 \times 4 = 20\text{cm}$)

Measure the length of your table.

Measure the width of your table.

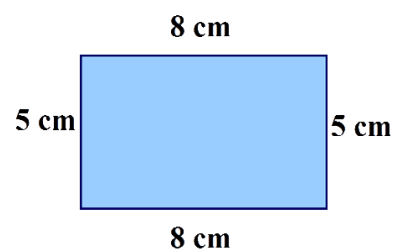
perimeter

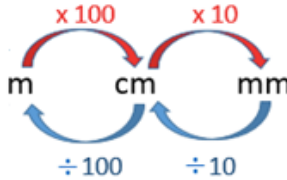
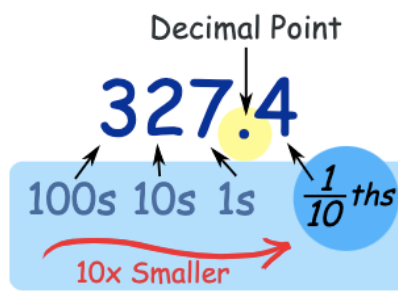

The perimeter is the distance around a two dimensional (2D) shape. This can be calculated by adding all the sides of a shape together.


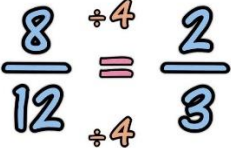



The side of a square is 2cm long
What is the perimeter?

$$(2 + 2 + 2 + 2 = 8\text{cm})$$



	The perimeter of this shape is $3 + 7 + 3 + 7 = 20$.	What is the perimeter of the rectangle above? ($8 + 8 + 5 + 5 = 26\text{cm}$)
measurement centimetre (cm) millimetre (mm) metre (m)	<p>To measure something is to give a number to some property of the thing. Measuring something puts the amount of the thing into numbers.</p> <p>Measurement can be written using many different units.</p> <p>Centimetres (cm), millimetres (mm) and metres (m) are all units of length.</p> <p>1cm = 10mm 1m = 100cm</p> 	<p>Michael walks 7000cm in one day, how many metres has he walked? (7000cm = 70m)</p> <p>Convert the following measurements:</p> <ol style="list-style-type: none"> 1) 20cm = ___ mm (200mm) 2) 300cm = _____m (3m) 3) 70m = _____cm (7,000cm) 4) 400mm = _____cm (40cm)
place value tenths	<p>A number can have many digits and each digit has a special place and value. Starting from the right the first digit will be at ones place and the second digit at tens place. The first digit to the right of the decimal point is the tenths digit.</p>  <p>A tenth can be represented as $\frac{1}{10}$. In decimal form, it is 0.1.</p>	<p>In 17.5, what is the value of the 5? (The 5 is in the tenths column so the value is 5 tenths or 0.5)</p> <p>In 28.9 what is the value of the 2? (The 2 is in the tens column so the value is 2 tens or 20)</p> <p>If you add together 24 tenths and 36 tenths what is your total? (6)</p> <p>How many tenths equal one?</p>
fraction numerator denominator	<p>A fraction is a part of a whole number, and a way to split up a number into equal parts.</p>  <p>The numerator is the top number of a fraction.</p>	<p>What is $\frac{1}{2}$ of 300?</p> <p>Identify the numerator and denominator in the fraction $\frac{3}{4}$.</p> <p>Of the 10 books on fairytales, Gilly borrowed 4. What fraction of the books on fairytales did she borrow? ($\frac{4}{10}$)</p>

	The denominator is the bottom number of a fraction.	At my party, mum cut the pizza into 8 equal slices. She gave 5/8 of the pizza to my dad and I ate the rest. How much of the pizza did I eat? (3/8)
equivalent	<p>Equivalent signifies that 2 things are equal.</p> 	<p>Which of the following sums are equivalent to 100?</p> <p>a) 73 + 37 b) 61 + 39 (equivalent) c) 45 + 65 d) 53 + 47 (equivalent)</p> <p>List 10 fractions that are equivalent to one half.</p> <p>Lawrence says that he has found all of the fractions equivalent to one half. Jemma says he cannot have found them all. Why do you think Jemma says this?</p>
simplify	<p>To simplify (or reduce) a fraction means to make it as simple as possible.</p>  <p>We can do this by dividing the denominator and numerator by the same number.</p>	<p>Write the fractions below in the simplest form.</p> <p>$\frac{5}{10}$ $\frac{6}{8}$ $\frac{3}{9}$</p> <p>Which fraction is not written in its simplest form?</p> <p>$\frac{4}{5}$ $\frac{3}{5}$ $\frac{4}{6}$</p>
greater than (>) less than (<)	<p>These symbols can be used to tell us that a number is 'greater than' or 'less than' another number.</p>  <p>When one value is smaller than another we use a "less than" sign (<). Example: 3 < 5</p> <p>When one value is bigger than another we use a "greater than" sign (>). Example: 9 > 6.</p>	<p>Write the symbol which makes the problem true.</p> <p>294 <input type="checkbox"/> 533 429 <input type="checkbox"/> 409 563 <input type="checkbox"/> 737 465 <input type="checkbox"/> 466</p> <p>(<,>,<,<)</p>
decimal	A decimal number can be defined as a number whose whole number part and the fractional part is separated by a decimal point.	<p>Write a decimal number that comes between 5 and 6. (5.1)</p> <p>Write a decimal number that comes between 10 and 11 (10.4)</p>

The dot in a decimal number is called a decimal point. The digits following the decimal point show a value smaller than one.

45.6 = $40 + 5 + \frac{6}{10}$

Decimal Number

Order the following decimal numbers from smallest to largest.
3.4 3.2 3.8 3.1 3.7 3.0
(3.0, 3.1, 3.2, 3.4, 3.7, 3.8)