
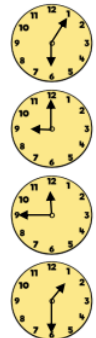



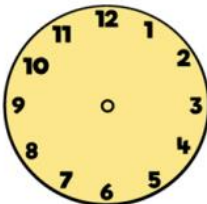
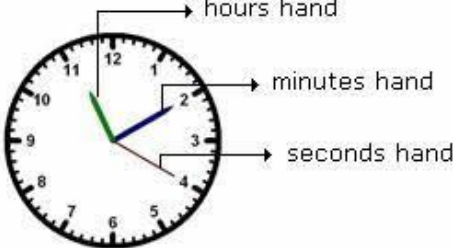
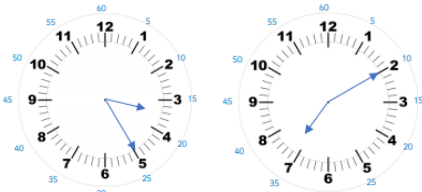

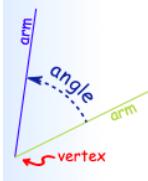

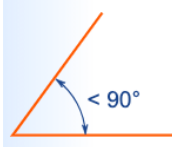
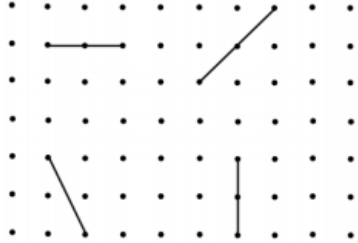
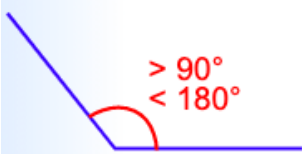
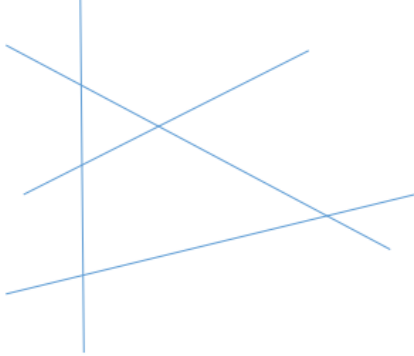
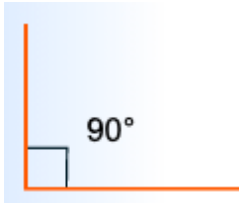
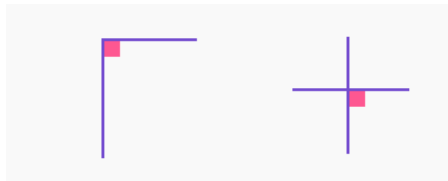
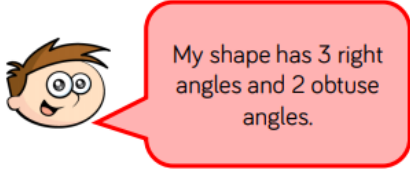


Power Maths Key Vocabulary Year 3 – Block C

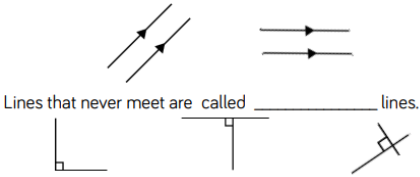
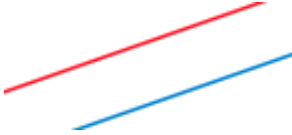
Key Vocabulary	Explanation of Terms	Example Question(s)
midnight	Midnight is twelve o'clock in the middle of the night.	<p>Here is a clock.</p>  <p>Use the words to complete the sentences.</p> <p>minute hour day time</p> <p>The shortest hand is the _____ hand. The longest hand is the _____ hand.</p> <p>Match the clocks to the correct times.</p>  <p>9 o'clock 5 past 6 Half past 1 Quarter to 12</p> <p>Aisha leaves her house at sixteen minutes past 4. She walks 10 minutes to the bus stop. What time does she arrive at the bus stop? Write your answer in words. (twenty-six minutes past 4)</p> <p>Circle am or pm for each statement.</p> <p> It is five o'clock in the afternoon. am pm</p> <p>I am eating my breakfast before school.  am pm</p>
midday	Midday is twelve o'clock in the middle of the day.	
am	The abbreviation 'am' stands for the Latin ante meridiem, meaning before midday. This abbreviation should be used only with numerals (e.g. 9:00 am or 9 am, not nine am).	
pm	The abbreviation 'pm' stands for the Latin ante post meridiem, meaning after midday. This abbreviation should be used only with numerals (e.g. 9:00 am or 9 am, not nine am).	
year	A year is a period of 12 months or 365 or 366 days. It is the time taken by the earth to make one revolution around the sun.	
month	A month is a unit of time, used with calendars. It can also be defined as period of 4 weeks or 30 days.	
hour	An hour is a period of time equal to 60 minutes. There are 24 hours in a day.	
minute	A minute is a period of time equal to sixty seconds or a sixtieth of an hour.	
second	The basic unit of time. There are 60 seconds in 1 minute and 3,600 seconds in an hour. In this clock the hand that moves the fastest shows the seconds. It is called the "Second Hand". One second is approximately the time of one heartbeat when you are resting. You can get a rough count of seconds	

	<p>by saying "one cat-and-dog, two cat-and-dog, three cat-and-dog, ... " etc., or you may prefer "a-thousand-and one, a-thousand-and two, a-thousand-and three, ... "</p>	<p>There are 24 hours in a day. How many hours are in 3 days? (72 hours) How many days is 120 hours? (5 days)</p>
<p>digital clock</p>	<p>A digital clock is a type of clock that displays the time digitally, i.e. in numerals or other symbols.</p> 	<p>Henry is walking from his house to school</p> <ul style="list-style-type: none"> • The walk is 18 minutes long. • He arrives at 8 minutes past 8 <p>What time does he leave the house? Draw the the time on the clock.</p> 
<p>analogue clock</p>	<p>An analogue clock is a clock or watch that has moving hands and (usually) hours marked from 1 to 12 to show you the time.</p>  <p>Some have Roman Numerals (I, II, III, etc) instead, or no numbers at all, instead only relying on the positioning of the hands and what angle they are at to indicate the time.</p>	<p>What time is it?</p>  <p>(03:25, 15:25 or 25 minutes past 3 / 07:10, 19:10 or 10 minutes past 7)</p>
<p>estimate</p>	<p>To find a value that is close enough to the right answer, usually without the need of a written calculation.</p>	<p>What numbers could be rounded to 230? (225, 226, 227, 228, 229, 231, 232, 233, 234)</p> <p>Estimate answers to the following questions:</p> <p>47 + 35 =</p> <p>35 + 23 =</p> <p>11 + 67 =</p> <p>(90, 60, 80)</p>
<p>angle</p>	<p>An angle is a measure of a turn, measured in degrees or °. There are 360° in a full turn.</p> <p>You can find out the size of an angle using a protractor.</p>	<p>Tick the images where you can see an angle. Explain your choices.</p> 

		<p>The letter 'X' has four angles.</p> 
<p>acute</p>	<p>An acute angle is an angle that measures between 90° and 0°, meaning it is smaller than a right angle (an "L" shape) but has at least some space between the two lines that form it. A "V" shape is an example of an acute angle.</p> 	<p>Write your name in capital letters. How many angles can you see in each letter? How many angles are there in your full name?</p> <p>Draw a line along the dots to make a right-angle with each of these lines:</p> 
<p>obtuse</p>	<p>An obtuse angle has a measurement greater than 90 degrees but less than 180 degrees.</p>  <p>Examples of obtuse angles are: 100°, 120°, 140°, 160°, 170° etc.</p>	<p>Label the acute angles (A) and obtuse angles (O) on the diagram below</p> 
<p>right angle</p>	<p>A right angle is equal to 90°, one quarter of a full revolution.</p>  <p>We can find the right angles in shapes.</p> <p>A square or rectangle has four corners with right angles.</p> <p>All triangles with one angle right are called right-angled triangles.</p> 	<p>Teddy describes a shape.</p>  <p>What could Jack's shape look like?</p> <p>Describe a shape in terms of its angles for a friend to draw.</p>

parallel

Parallel lines are two lines that are always the same distance apart and never touch. In order for two lines to be parallel, they must be drawn in the same plane, on a perfectly flat surface like a wall or sheet of paper.



Lines that never meet are called _____ lines.

Straight lines that meet at a right angle are called _____ lines.

Find 3 sets of parallel and perpendicular lines in the classroom.

Draw a line that is parallel to this one.



Draw a line that is perpendicular to this one.

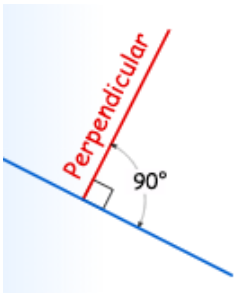


Use arrows to show the parallel lines in these shapes.
Use the right angle notation to show the perpendicular lines.

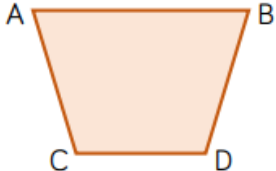


perpendicular

Perpendicular lines are defined as two lines that meet or intersect each other at right angles (90°).



True or False?



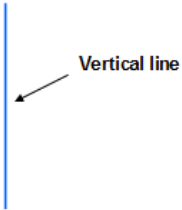
Line AB is parallel to line CD.
Line AC is parallel to line BD.
Line AC is perpendicular to line CD.

Redraw the shape so that line BD is perpendicular to line CD.

(true, false, false)

vertical

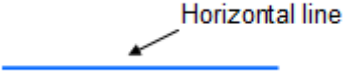
A vertical line is one which runs up and down the page.



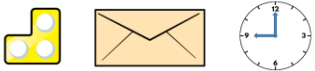
A vertical line is perpendicular to a horizontal line.

horizontal

A horizontal line is one which runs left-to-right across the page.



Label the horizontal and vertical lines in each of these images.



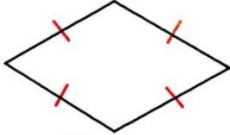

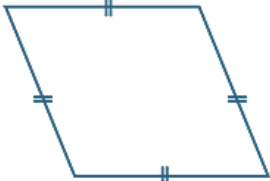
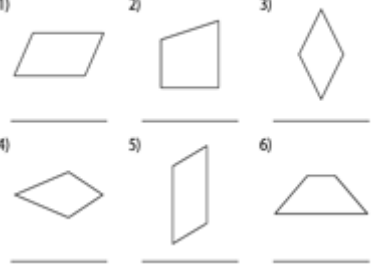


Sort the shapes/symbols/letters depending on whether they have a horizontal line of symmetry, a vertical line of symmetry or both.



Horizontal line of symmetry	Vertical line of symmetry	Horizontal and vertical lines of symmetry

Eva completes the table by drawing shapes.

Can you spot and correct her mistake?

	<p>It comes from the word 'horizon', in the sense that horizontal lines are parallel to the horizon.</p>	<p>(Eva thinks the star has both lines of symmetry, but it only has a vertical line of symmetry)</p>
<p>rhombus</p>	<p>A rhombus (plural rhombi or rhombuses) is a quadrilateral whose four sides all have the same length.</p>  <p style="text-align: center;">Rhombus</p> <p>Another name is equilateral quadrilateral, since equilateral means that all of its sides are equal in length.</p> <p>A rhombus with right angles is a square.</p>	<p>Which of the following shapes are rhombuses?</p>  <p>(the first 4 shapes)</p>
<p>parallelogram</p>	<p>A parallelogram is a quadrilateral that has two pairs of parallel sides.</p> 	<p>State whether each quadrilateral is a parallelogram.</p>  <p>(yes, no, yes, no, yes, no)</p> <p>Which quadrilateral is NOT a parallelogram?</p> <ol style="list-style-type: none"> rectangle square trapezoid rhombus <p>(trapezoid)</p>
<p>cuboid</p>	<p>A cuboid is a solid or hollow three-dimensional (3D) shape with six rectangular surfaces or four rectangular and two square surfaces.</p>  <p><u>Properties</u></p> <ul style="list-style-type: none"> • It has six flat sides. 	<p>Choose one of these 3D shapes and describe it to a friend thinking about the number and shape of faces it has and the number of edges and vertices. Can your friend identify the shape from your description?</p>  <p>How many faces/edges/vertices/curved surfaces does a _____ have? What shape are the faces of a _____? What types of lines can</p>

- All angles are right angles.
- All of its faces are rectangles/squares.

cone

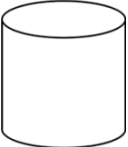
A cone is a distinctive three-dimensional (3D) shape that has a flat surface and a curved surface, pointed towards the top.



The pointed end of the cone is called the apex, whereas the flat surface is called the base.

cylinder

A cylinder is a three-dimensional (3D) solid that holds two parallel bases joined by a curved surface, at a fixed distance.



These bases are normally circular in shape (like a circle) and the centre of the two bases are joined by a line segment, which is called the axis.

sphere

A three-dimensional (3D) object shaped like a ball.

Every point on the surface is the same distance from the centre.

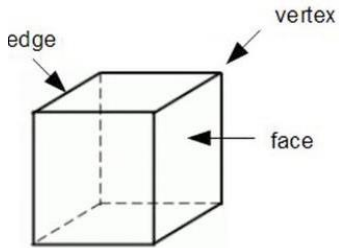
face

edge

vertex

vertices

A face is a flat surface of a solid object.



An edge is where two faces meet. For example a cube has 12 edges, a cylinder has two and a sphere has none.

A vertex is a point where 2 or more lines/sides meet (a corner). The plural of vertex is vertices.

you see on a _____? Can you spot objects around the classroom that are cubes/cuboids etc.? Can you guess the shape from the description given?

Mo has a 3-D shape, he says,



One face of my 3-D shape is a square.

What could Mo's shape be?

Alex says,



All 3-D shapes are prisms.

Do you agree with Alex? Explain why.

Sort a selection of 3-D shapes using the criteria in the table.

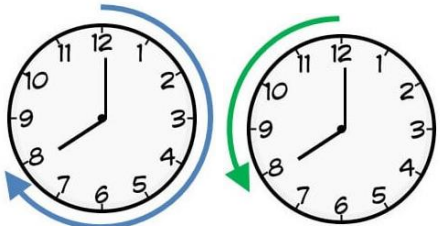



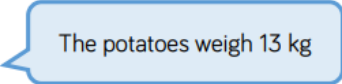
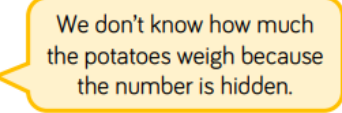
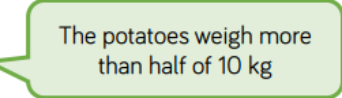

	At least one triangular face	No triangular faces
Prism		
Not a prism		






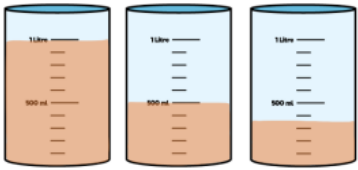
Change the headings of the table and re-sort your shapes.

I have 9 straws and 6 balls of Play-Doh.



What 3-D shape can I create using all of the straws and Play-Doh? Have a go at making it.

<p>clockwise</p> <p>anticlockwise</p>	<p>Moving in the direction of hands on a clock is called clockwise.</p> <p>The opposite directions is anticlockwise.</p>  <p style="text-align: center;">Clockwise Anti-Clockwise</p>	<p>Look at the hands of the clock. Turn the minute hand one quarter of a turn clockwise. Where is the large hand pointing? What is the new time?</p>  <p>What turn has the minute hand made?</p> <p>Give children instructions to encourage them to make $\frac{1}{2}$, $\frac{1}{4}$, $\frac{3}{4}$ and whole turns in different directions from different starting points. Allow children the opportunity to give instructions too.</p>
<p>mass</p> <p>gram (g)</p> <p>kilogram (km)</p>	<p>Mass is a measure of the amount of matter in an object. Mass measures the quantity of matter regardless of both its location in the universe and the gravitational force applied to it. An object's mass is constant in all circumstances; contrast this with its weight, a force that depends on gravity.</p> <p>A gram is a unit of mass in the metric system defined as one thousandth of a kilogram.</p> <p>A kilogram is equal to 1,000g.</p>	 <p>Who do you agree with? Explain why.</p>   <p>Amir</p>  <p>Jack</p>  <p>Rosie</p>
<p>weight</p>	<p>An object's weight is how hard gravity is pulling on it.</p> <p>We think the weight is the same everywhere because we all live on the surface of the planet Earth!</p>	<p>Can you calculate the weight of the potatoes? Explain how you did it.</p>
<p>scale</p>	<p>Here, we can see a scale on the measuring jug. Each small interval or division measures 100 ml.</p>  <p style="text-align: center;">Scale : 1 division = 100 m</p>	<p>(Amir is wrong – he has counted on 3 from 10 kg when he should have counted back 3 kg. Jack is wrong because we can work out the scale by using the 10 kg and counting back. They weigh 7 kg. Rosie is correct because half of 10 is 5 and the arrow is past where 5 kg would be. The weight of the potatoes is 7 kg.)</p>

		<p>The chocolate bar weighs 100 g. How much does one muffin weigh?</p>  <p>How much does each side weigh?</p> <p>(The chocolate bar must weigh the same as two muffins so one muffin must weigh 50g. Each side weighs 150 g.)</p> <p>Using only 3 objects and a weighing scale, try to get as close to 2kg as possible. Explain why you chose those objects. Work out how much more or how much less is needed to make it 2kg.</p>
<p>capacity</p> <p>litre (l)</p> <p>millilitre (ml)</p>	<p>Capacity is the amount something can hold.</p> <p>This is measure in litres (l) and millilitres (ml).</p> 	<p>Use a variety of containers. Can you estimate how much liquid they hold? Check your estimates using measuring jugs and cylinders to see how accurate you were.</p> <p>Use the clues to work out who has which container.</p> <p> I have exactly half a litre</p> <p>Annie</p> <p> I have 1,000 ml</p> <p>Amir</p> <p> I have more than 300 ml but less than 400 ml</p> <p>Eva</p>  <p>(Annie has container B Ron has container A Eva has container C)</p>

		<p>True or False?</p> <p>The tallest container has the largest capacity.</p> <p>Use containers to decide whether the statement is true or false.</p> <p>Record the capacity of the different containers in a table.</p>
--	--	--