## Scales

Scale	The <b>ratio</b> of the <b>length</b> in a <b>model</b> to the length of the <b>real</b> thing.	Real Horse 1500 mm high 2000 mm long 200 mm long
Scale (Map)	The ratio of a distance on the map to the actual distance in real life.	1 in. = 250 mi 1 cm = 160 km
Bearings	<ol> <li>Measure from North (draw a North line)</li> <li>Measure clockwise</li> <li>Your answer must have 3 digits (eg. 047°)</li> <li>Look out for where the bearing is measured <u>from</u>.</li> </ol>	The bearing of $\underline{B}$ from $\underline{A}$ The bearing of $\underline{A}$ from $\underline{B}$ B
Compass Directions	You can use an acronym such as 'Never Eat Shredded Wheat' to remember the order of the compass directions in a clockwise direction. Bearings: $NE = 045^\circ$ , $W = 270^\circ etc$ .	

## Similarity and Congruency

Congruent Shapes	Shapes are congruent if they are <b>identical</b> - <b>same shape</b> and <b>same size</b> .	
Shapes	Shapes can be rotated or reflected but still be congruent.	
Similar Shapes	Shapes are similar if they are the same shape but different sizes.	
	The proportion of the matching sides must be the same, meaning the ratios of corresponding sides are all equal.	
Scale Factor	The <b>ratio of corresponding sides</b> of two similar shapes. To find a scale factor, <b>divide a length</b> on one shape <b>by the</b>	16 10 15
	corresponding length on a similar shape.	Scale Factor = $15 \div 10 = 1.5$

## **Constructing Triangles**

Side, Side, Side	<ol> <li>Draw the base of the triangle using a ruler.</li> <li>Open a pair of compasses to the width of one side of the triangle.</li> <li>Place the point on one end of the line and draw an arc.</li> <li>Repeat for the other side of the triangle at the other end of the line.</li> <li>Using a ruler, draw lines connecting the ends of the base of the triangle to the point where</li> </ol>
	the arcs intersect.
Side, Angle, Side	1. Draw the base of the triangle using a ruler.
Â	2. Measure the angle required using a protractor and mark this angle.
4cm	<ol> <li>Remove the protractor and draw a line of the exact length required in line with the angle mark drawn.</li> </ol>
B 50° C	<ol> <li>Connect the end of this line to the other end of the base of the triangle.</li> </ol>
Angle, Side, Angle	1. Draw the base of the triangle using a ruler.
×	2. Measure one of the angles required using a protractor and mark this angle.
	3. Draw a straight line through this point from the same point on the base of the triangle.
y 42° 51° Z 8.3cm	4. Repeat this for the other angle on the other end of the base of the triangle.

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