
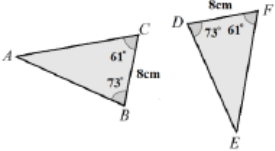

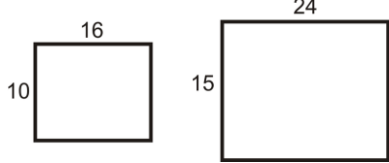
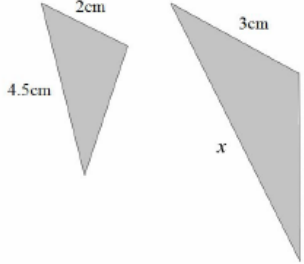


Topic: Congruence and Similarity

Topic/Skill	Definition/Tips	Example
1. Congruent Shapes	Shapes are congruent if they are identical - same shape and same size. Shapes can be rotated or reflected but still be congruent.	
2. Congruent Triangles	4 ways of proving that two triangles are congruent: 1. SSS (Side, Side, Side) 2. RHS (Right angle, Hypotenuse, Side) 3. SAS (Side, Angle, Side) 4. ASA (Angle, Side, Angle) or AAS <u>ASS does not prove congruency.</u>	 <p style="text-align: center;"> $BC = DF$ $\angle ABC = \angle EDF$ $\angle ACB = \angle EFD$ \therefore The two triangles are congruent by AAS. </p>
3. 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.	
4. Scale Factor	The ratio of corresponding sides of two similar shapes. To find a scale factor, divide a length on one shape by the corresponding length on a similar shape.	 <p style="text-align: center;">Scale Factor = $15 \div 10 = 1.5$</p>
5. Finding missing lengths in similar shapes	1. Find the scale factor . 2. Multiply or divide the corresponding side to find a missing length. If you are finding a missing length on the larger shape you will need to multiply by the scale factor. If you are finding a missing length on the smaller shape you will need to divide by the scale factor.	 <p style="text-align: center;"> Scale Factor = $3 \div 2 = 1.5$ $x = 4.5 \times 1.5 = 6.75\text{cm}$ </p>
6. Similar Triangles	To show that two triangles are similar, show that: 1. The three sides are in the same proportion 2. Two sides are in the same proportion, and their included angle is the same 3. The three angles are equal	