



Year 9 Maths Learning Journey

Summer Term 1

Reasoning with proportion: Enlargement and similarity

Core knowledge	
Recognise enlargement and similarity “What do you notice about the angles of similar shapes?”	WORKSHEET
Enlarge a shape by a positive integer scale factor “How do you enlarge a shape that has no horizontal or vertical sides?”	WORKSHEET
Enlarge a shape by a positive integer scale factor from a point “What is meant by the ‘centre of enlargement’?”	WORKSHEET
Enlarge a shape by a positive fractional scale factor “Does enlargement always make a shape larger?”	WORKSHEET
Enlarge a shape by a negative scale factor (H) “Which scale factor produces a larger shape? -2 or $\frac{1}{2}$?”	WORKSHEET
Work out missing sides and angles in a pair of given similar shapes “How do you identify corresponding sides and angles in a pair of similar shapes?”	WORKSHEET
Solve problems with similar triangles (H) “Are similar triangles always in the same orientation?”	WORKSHEET
Explore ratios in right-angled triangles (H) “Why are all right angled triangles with an angle of 30° similar?”	WORKSHEET

Learning Checkpoints

LC Title	Completed	Dirt
Enlargement and similarity		

Key Vocabulary

Similar - two figures are similar if their corresponding angles are congruent, and the ratios of the lengths of their corresponding sides are equal.

Ratio - A part to part comparison.

Enlargement - To enlarge a shape, multiply all lengths of the shape by the scale factor.

Scale Factor – the ratio between corresponding lengths

Corresponding - the angles in matching corners are called corresponding angles.

Object – the original shape

Image – the transformed (enlarged) shape

Integer – whole number

Positive – a value greater than 0

Centre of enlargement - a point which tells you where to draw an enlargement.

Fraction – the result of dividing one integer by another integer

Invert – the opposite in effect

Negative – a value below 0

Orientation – the direction or the angle of a given object

Adjacent – next to/beside

Hypotenuse - the longest side of a right-angled triangle, opposite the right angle.

Right Angle - One quarter of a complete turn. An angle of 90 degrees.