

Mathematics Target Related Expectations (TReE)

Shape and Measure	Pathway 1 (Target Grade 1-3)	Pathway 2 (Target Grade 4-6)	Pathway 3 (Target Grade 7-8)
		7 Angles and lines	8 Line and angles
	Know a right angle is 90 degrees.	Describe and label lines, angles and triangles.	Work out unknown angles when two or more lines meet or cross at a point.
	Recognise quarter, half and three-quarter turns.	Identify angle, side and symmetry properties of triangles.	Work out unknown angles involving parallel lines.
	Recognise parallel and perpendicular lines.	Use a protractor to measure and draw angles and estimate the size of angles.	Describe the line and rotational symmetry of triangles.
	Use compass points.	Solve problems involving angles and triangles.	Understand how to prove that a result is true.
	Recognise, draw and measure acute and obtuse angles.	Use the rule for the sum of angles in a triangle.	Use properties of a triangle to work out unknown angles.
	Label lines and angles.	Use a ruler and protractor to draw triangles accurately.	Use the properties of isosceles and equilateral triangles to solve problems.
	Find missing angles on a straight line.	Use the rule for angles on a straight line, angles around a point and vertically opposite angles.	Describe the line and rotational symmetry of quadrilaterals.
	Find missing angles round a point.	Identify and name types of quadrilaterals.	Describe the properties of quadrilaterals.
	16 Angles	Use the rule for the sum of angles in a quadrilateral and Solve angle problems involving quadrilaterals.	Solve problems involving quadrilaterals.
	Use a protractor to measure and draw obtuse and reflex angles.	16 Lines and angles	Work out the interior and exterior angles of a polygon.
	Estimate the size of reflex angles.	Matching quadrilaterals to their descriptions.	9 Perimeter, area and volume
	Use vertically opposite angles.	Using known facts about quadrilaterals to solve problems.	Calculate the area of triangles, parallelograms, trapeziums, rectangles and triangles.
	Work out the size of unknown angles in a triangle.	Using alternate angles to find unknown angles.	Calculate the perimeter of shapes made from rectangles and triangles.
	Accurately draw triangles using a ruler and protractor.	Using reasoning to complete mathematical proofs.	Identify nets of different 3D shapes.
	Accurately draw a net of a 3D shape.	Solving geometrical problems using side and angle properties of triangles and quadrilaterals.	Know the properties of 3D shapes.
	Investigate the sides of a right-angled triangle.	Identifying corresponding angles.	Calculate the surface area of a cube and cuboids.
	8 Measuring and shapes	Solving problems using properties of angles in parallel and intersecting lines.	Calculate the volume of a cube and cuboids.
	Identify triangles, squares and rectangles.	Calculating the sum of the interior and exterior angles of a polygon.	Convert between different units of volume: cm^3 , ml and litres.
	Recognise the properties of triangles, squares and rectangles.	Calculating the interior and exterior angles of a polygon.	Convert between metric measures for area and volume.

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Pathway 1 (Target Grade 1-3)	Pathway 2 (Target Grade 4-6)	Pathway 3 (Target Grade 7-8)
Describe the line symmetry of triangles, quadrilaterals and other shapes.	Finding unknown angles by forming and solving equations.	13 2D shapes and 3D solids
Solve problems using line symmetry and describe rotational symmetry.	Solving geometrical problems showing reasoning.	Use and sketch 2D representations of 3D solids.
Find the perimeter of squares, rectangles and regular polygons.		Name the different parts of a circle.
Identify polygons.	12 Area and volume	Calculate the surface area and volume of prisms.
Solve problems involving the perimeter of squares and rectangles.	Derive and use the formula for the area of a triangle.	Calculate the circumference and area of a circle.
Use metric units to measure area.	Find areas of compound shapes.	Calculate the radius or diameter when you know the circumference.
Calculate the area of squares and rectangles.	Calculate areas of parallelograms and trapezia.	Calculate the radius or diameter when you know the area.
10 Transformations	Calculate the volume of cubes and cuboids.	Calculate the volume and surface area of a cylinder.
Reflect a shape in a mirror line.	Sketch nets of 3D solids.	Use Pythagoras' theorem in right-angled triangles.
Translate a shape.	Calculate the volume of cubes and cuboids.	
Draw and describe rotations.	Calculate the surface area of cubes and cuboids.	
Identify congruent shapes.	10 Transformations	15 Transformations
Identify the properties of quadrilaterals.	Identify congruent shapes.	Describe and carry out translations.
12 Shapes and measures in 3D	Enlarge shapes using given scale factors.	Describe and carry out reflections.
Recognise and name 3D shapes.	Work out the scale factor given an object and its image.	Describe and carry out rotations.
Count faces edges and vertices.	Recognise line and rotational symmetry in 2D shapes.	Enlarge a shape.
know properties of 3D shapes from 2D representations.	Identify all the symmetries of 2D and 3D shapes.	Describe an enlargement.
Identify nets of 3D solids including cubes and cuboids.	Describe a reflection and rotation on a coordinate grid.	Enlarge a shape using negative scale factors.
Draw nets of 3D solids using a ruler and protractor.	Translate 2D shapes.	Enlarge a shape using fractional scale factors.
Calculate the surface area and volume of cubes and cuboids using formula.	Combine transformations.	Transform 2D shapes using a combination of reflection, rotation, enlargement and translation.
		Identify planes of reflection symmetry in 3D solids.
		Find the perimeter and area of 2D shapes after enlargement.
		Find the volume of 3D solids after enlargements.
		17 Constructions and loci
		Draw triangles accurately using a ruler and protractor.
		Draw diagrams to scale.

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	Pathway 1 (Target Grade 1-3)	Pathway 2 (Target Grade 4-6)	Pathway 3 (Target Grade 7-8)
			Draw accurate nets of 3D solids.
			Construct triangles using a ruler and compasses.
			Construct nets of 3D solids using a ruler and compasses.
			Bisect a line using a ruler and compasses.
			Construct perpendicular lines using a ruler and compasses.
			Bisect angles using a ruler and compasses.
			Draw accurate diagrams to solve problems.
			Draw a locus.
			Use loci to solve problems.
			19 Scale drawings and measures
			Use scales in maps and plans.
			Use and interpret maps.
			Measure and use bearings.
			Draw diagrams to scale using bearings.
			Draw diagrams to scale.
			Use and interpret scale drawings.
			Identify congruent and similar shapes.
			Use congruence to solve problems in triangles and quadrilaterals.
			Use similarity to solve problems in 2D shapes.