

Geometric Skills

Topic	Description
Determine the gradient of a straight line given 2 points	<ul style="list-style-type: none"> Use the gradient formula $m = \frac{y_2 - y_1}{x_2 - x_1}$
Calculate the volume of a standard solid	<ul style="list-style-type: none"> Calculate the volume of a cone, a sphere and a pyramid.
Similarity	<ul style="list-style-type: none"> Using the inter relationship between scalar lengths and area & volume of mathematically similar shapes
Circle Geometry	<ul style="list-style-type: none"> Calculating the length of an arc Calculating the area of a sector
Applying Pythagoras' Theorem	<ul style="list-style-type: none"> Using Pythagoras' Theorem in complex situations, including converse and 3D
Applying properties of shapes to calculate an angle using at least 2 steps	<ul style="list-style-type: none"> Shapes used may be quadrilaterals, polygons, circles and triangles Relationship in a circle between the centre, chord and perpendicular bisector
Working with 2D and 3D vectors	<ul style="list-style-type: none"> Adding or subtracting 2D vectors using directed line segments Determine the coordinates of a point from a diagram showing a 3D object.
Using vector components	<ul style="list-style-type: none"> Adding or subtracting 2 or 3 dimensional vectors using components
Calculating the magnitude of a vector	<ul style="list-style-type: none"> Magnitude of a 2 or 3 dimensional vector