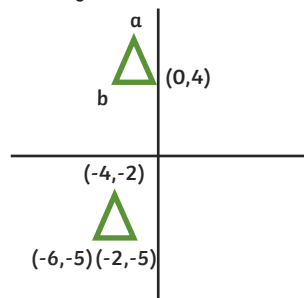


# Geometry Mat - Greater Depth

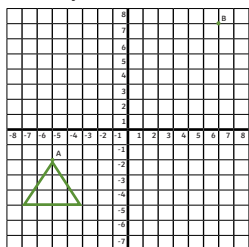
## Reflection and Translation

Describe positions on the full coordinate grid (all four quadrants).

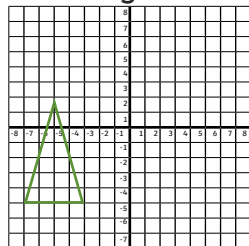
Plot points on a grid or calculate points using given information.



Draw and translate simple shapes on the coordinate plane, and reflect them in the axes. Translate this triangle so point A translates to point B.



Reflect this triangle about the x-axis.



## Shapes

Draw accurately 2D shapes using given dimensions and angles.

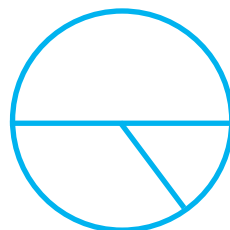
Draw a regular hexagon with side lengths of 6.5cm on plain paper using a pencil, ruler and protractor.

Recognise, describe and build simple 3D shapes, including making nets.

Draw the net of a pentagonal prism, with the edge of each pentagonal face as 5cm and the length of the rectangular face as 8cm.

Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius.

Label the parts of the circle drawn here:



## Angles

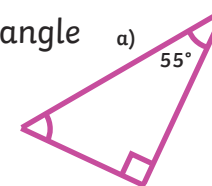
Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and know the angles in common regular polygons.

Complete the criteria for this Carroll diagram:

	All sides equal length	Sides not all equal length
Has a right angle		
Has no right angles		

Know the internal angle of a hexagon.

Explain why the missing angle  $\alpha$  in this triangle is  $35^\circ$ .



Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles.

Calculate angle V.

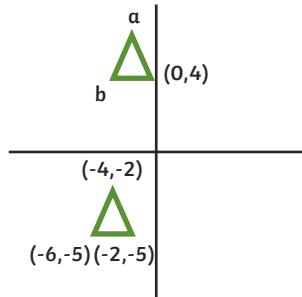


# Geometry Mat - Expected

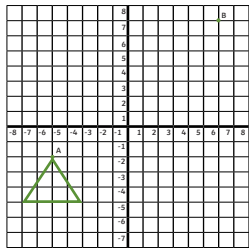
## Reflection and Translation

Describe positions on the full coordinate grid (all four quadrants).

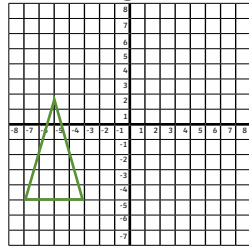
Plot points on a grid or calculate points using given information.



Draw and translate simple shapes on the coordinate plane, and reflect them in the axes. Translate this triangle so point A translates to point B.



Reflect this triangle about the x-axis.



## Shapes

Draw 2D shapes using given dimensions and angles.

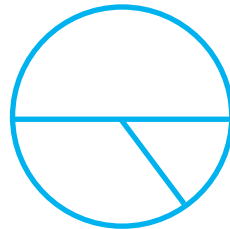
Draw a square with side lengths of 6.5cm on plain paper using a pencil, ruler and protractor.

Recognise, describe and build simple 3D shapes, including making nets.

Draw the net of a triangular prism, with the edge of each triangular face as 5cm and the length of the rectangular face as 8cm.

Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius.

Label the parts of the circle drawn here:



## Angles

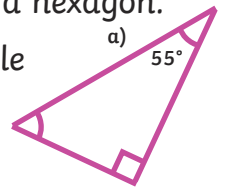
Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons.

Put these shapes in the following Carroll diagram: rhombus, parallelogram, regular hexagon, isosceles triangle, rectangle.

	All sides equal length	Sides not all equal length
Has a right angle		
Has no right angles		

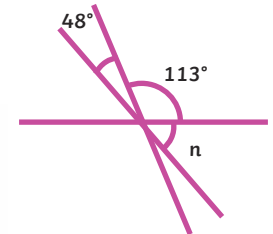
Find the internal angle of a hexagon.

Calculate the missing angle in this triangle.



Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles.

Calculate angle n.

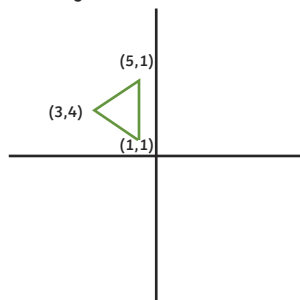


# Geometry Mat - Working Towards

## Reflection and Translation

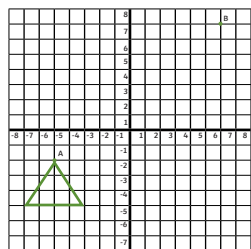
Describe positions in the first quadrant of a coordinate grid.

Plot points on a grid or calculate points using given information.



Draw and translate simple shapes on the coordinate plane, and reflect them in the axes.

Translate this triangle so point A translates to point B.



## Shapes

Draw rectangles and right-angled triangles using given dimensions and angles.

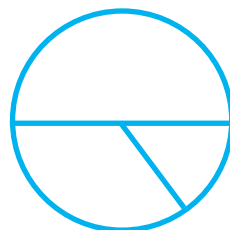
Draw a square with a side length of 7cm on plain paper using a pencil, ruler and set square.

Recognise, describe and build cuboids, including making nets.

Draw the net of a cuboid with dimensions of 9cm, 6cm and 4cm.

Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius.

Label the parts of the circle drawn here:



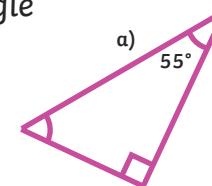
## Angles

Compare and classify simple geometric shapes based on their properties and sizes and find unknown angles in any triangles.

Put these shapes in the following Carroll diagram: rhombus, parallelogram, square, isosceles triangle, rectangle.

	All sides equal length	Sides not all equal length
Has a right angle		
Has no right angles		

Calculate the missing angle in this triangle.



Recognise angles where they are on a straight line, or are vertically opposite, and find missing angles.

Calculate angle n.

