Unit 13
Geometry – properties of shapes

In this unit we will ...

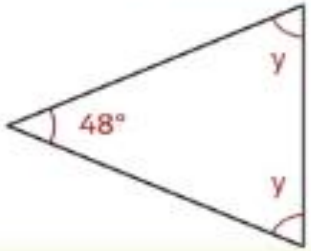
- Measure angles and draw shapes accurately using a ruler and protractor
- Calculate unknown angles in shapes and on lines using angle facts
- Explore properties of polygons and circles
- Identify 3D shapes from 2D representations
- Draw multiple nets for a 3D shape

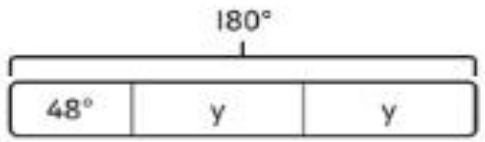
How can you use your knowledge of angles on a straight line to work out what the interior angles of a triangle add up to?

We will need some maths words. Which ones do you recognise? What do they mean?

degree | angle | obtuse | acute | reflex
right angle | protractor | triangle | isosceles
isometric | equilateral | scalene | regular | polygon
quadrilateral | parallelogram | kite | rhombus | trapezium
diameter | radius | circumference | concentric | perimeter
nets | pyramid | tetrahedron | cylinder | prism
vertically opposite angles | cuboid | cube

We also need to be able to use bar models to calculate unknown angles. How can you work out the size of this angle without measuring?



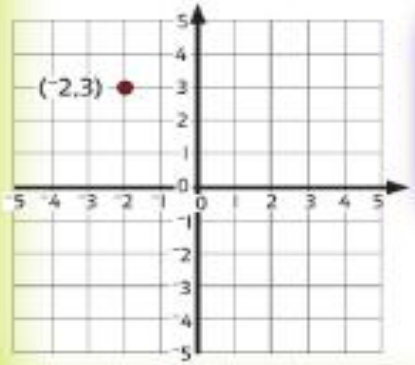


Unit 14

Geometry – position and direction

In this unit we will ...

- Look at how we can use coordinates to describe the position of a point on a grid
- Look at how coordinates can have positive or negative values
- Explore how we can use our knowledge of properties of shapes to help us solve problems on a coordinate grid
- Explore how we can move and change shapes on a coordinate grid, through translations and reflections

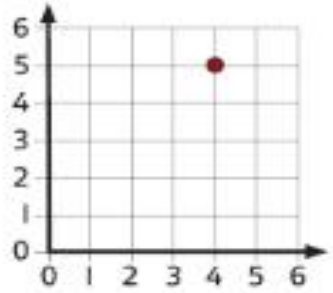


We are going to use grids like this in this unit. How is it different to what you have met before?

We will need some maths words. Which ones have you seen before?

quadrant | four quadrants | translate | translation | *x*-axis | *y*-axis | axis | axes | horizontal | vertical | vertex | vertices | reflect | reflection | positive | negative

We will need this too. Can you work out how we could describe the position of the point on the grid?



Unit 15
Problem solving

In this unit we will ...

- Solve problems about numbers, including fractions and ratios
- Use representations to help make sense of problems
- Use the four operations flexibly
- Reason about problems with a context and without a context
- Apply our understanding of measurement and geometry to solve problems

In previous units, we used the four operations to solve calculations. Which operations do you need to find the value of the triangle?

▲ + ▲ − 120 = 300

We will need some maths words. Which ones do you remember?

partition, estimate, round, compare, equivalent, percentage, ratio, proportion, convert, common denominator, coordinates, translation, reflection, vertex, scaling, isosceles triangle

We will also use bar models and number lines.

What values do the question marks represent in the number line and bar model below?