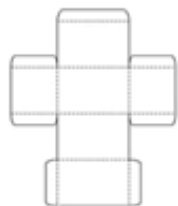


# Geometry Mat - Greater Depth Year 5

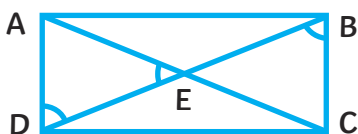
## Shapes

Identify 3D shapes, including cubes and other cuboids, from 2D representations.

Draw an accurate net for a cuboid with given measurements.



Use the properties of rectangles to deduce related facts and find missing lengths and angles.



$AB = 10.4$  cm, explain how you know  $DC$ ?

$\angle DBC = 62^\circ$ , what is  $\angle AED$ ?

Distinguish between regular and irregular polygons based on reasoning about equal sides and angles, knowing some of the properties of regular polygons.

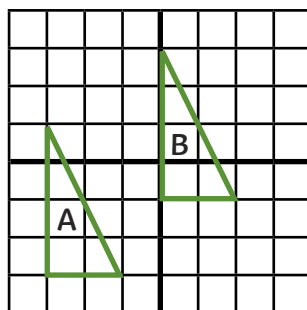
A regular polygon has equal sides and angles.



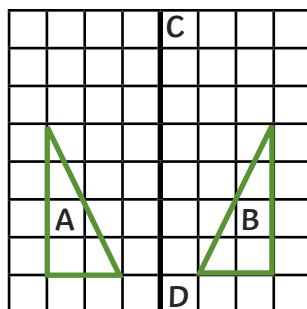
What is the internal angle of a regular pentagon, hexagon, octagon and decagon?

## Reflection and Translation

Identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed.



The triangle A is translated three squares to the right and two squares up to triangle B.

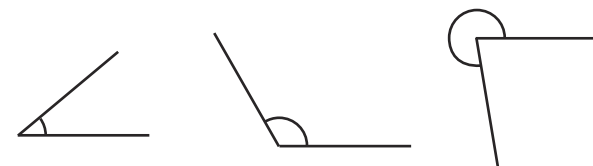


The triangle A is reflected about the line CD to triangle B.

## Angles

Know angles are measured in degrees: estimate accurately and compare acute, obtuse and reflex angles.

Estimate and name each angle.



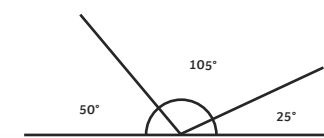
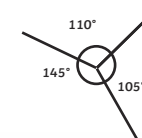
Draw given angles, and measure them in degrees ( $^\circ$ ).

Draw an angle of  $34^\circ$ .

Measure the angles above.

Identify:

- angles at a point and one whole turn ( $360^\circ$ );
- angles at a point on a straight line and a turn ( $180^\circ$ );
- other multiples of  $90^\circ$ .



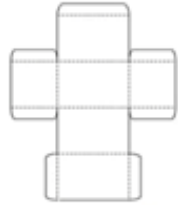
Know the multiples of right angles in degrees up to a full turn.

# Geometry Mat - Expected Year 5

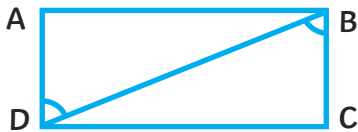
## Shapes

Identify 3D shapes, including cubes and other cuboids, from 2D representations.

What shape will be made from this net?



Use the properties of rectangles to deduce related facts and find missing lengths and angles.



$AB = 10\text{cm}$ , what is the length of  $DC$ ?

$\angle DBC = 60^\circ$ , what is  $\angle BDC$ ?

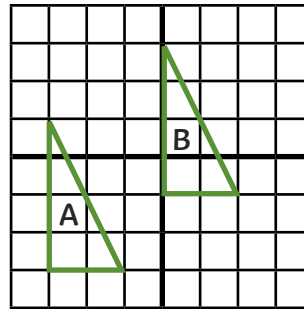
Distinguish between regular and irregular polygons based on reasoning about equal sides and angles.

A regular polygon has equal sides and angles.

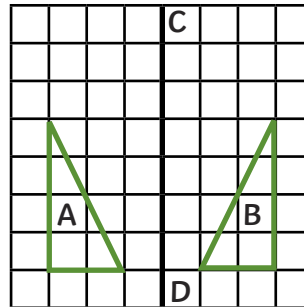


## Reflection and Translation

Identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed.



The triangle A is translated three squares to the right and two squares up to triangle B.

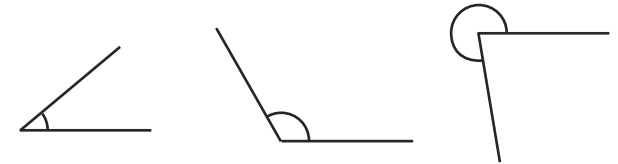


The triangle A is reflected about the line  $CD$  to triangle B.

## Angles

Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles.

Estimate and name each angle.



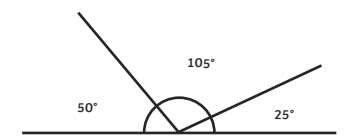
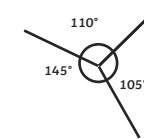
Draw given angles, and measure them in degrees ( $^\circ$ ).

Draw an angle of  $30^\circ$ .

Measure the angles above.

Identify:

- angles at a point and one whole turn ( $360^\circ$ );
- angles at a point on a straight line and a turn ( $180^\circ$ );
- other multiples of  $90^\circ$ .



1 right angle =  $90^\circ$ , 2 right angles =  $180^\circ$ ,

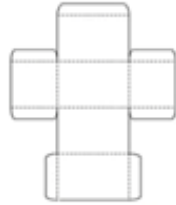
3 right angles =  $270^\circ$

# Geometry Mat - Working Towards Year 5

## Shapes

Identify 3D shapes, including cubes and other cuboids, from 2D representations.

This net will make a cuboid.



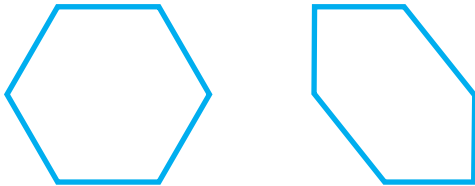
Use the properties of rectangles to deduce related facts missing lengths.



$AB = 10\text{cm}$ , what is the length of  $DC$ ?

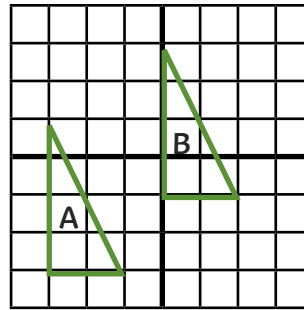
Distinguish between regular and irregular pentagons and hexagons based on reasoning about equal sides and angles.

A regular hexagon has 6 equal sides and angles.

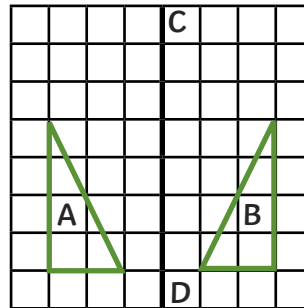


## Reflection and Translation

Identify, describe and represent the position of a shape following a simple reflection or translation, using the appropriate language.



The triangle A is translated three squares to the right and two squares up to triangle B.



The triangle A is reflected about the line  $CD$  to triangle B.

## Angles

Know angles are measured in degrees: estimate and compare acute and obtuse angles.

Estimate and name each angle.



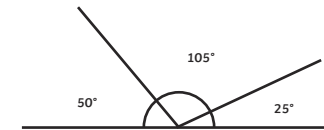
Draw given angles up to  $90^\circ$ , and measure them in degrees ( $^\circ$ ).

Draw an angle of  $30^\circ$ .

Measure the angles above.

Identify:

- angles at a point on a straight line and a turn ( $180^\circ$ );
- other multiples of  $90^\circ$ .



1 right angle =  $90^\circ$ , 2 right angles =  $180^\circ$ ,

3 right angles =  $270^\circ$