

Monday
18th May
Maths Y4

Good morning
Y4s

I hope you have all had a lovely weekend and that you are ready for some maths this morning. Here are the **Mastery** questions about angles. If you manage these, have a go at the Reasoning and Problem solving activities on the next page.

(Answers at the end – no peeping!!)

Enjoy!

Miss Bamber

If pupils have mastered this objective they will be able to complete these activities independently:

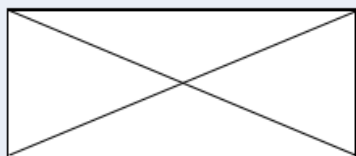
Harry said that he had drawn a triangle which had two obtuse angles within it. Is this true or false?

Explain your reasoning.

Harry also stated that he had created a triangle that had two right angles. Is this true or false?

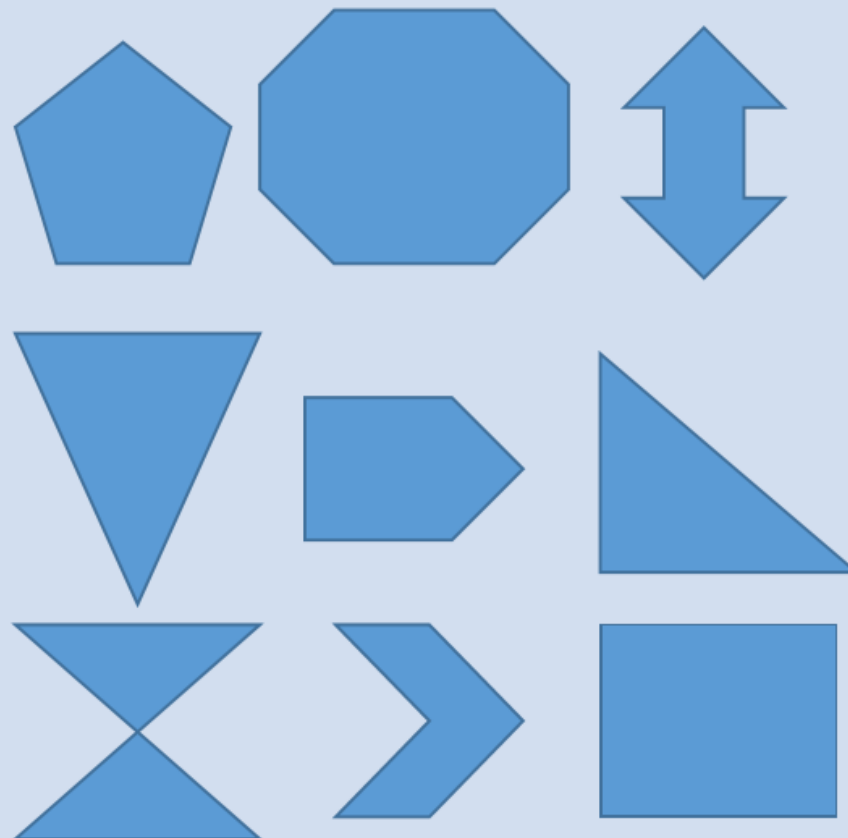
Explain your reasoning.

Rectangles and Squares



If you draw a line across the diagonals of rectangles or squares how many acute angles do you create?

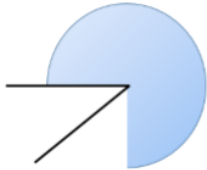
Circle any acute and tick any obtuse angles in the following polygons and shapes:



Go through each shape and polygon again and mark each right angle with 'R'.

Identify Angles

Reasoning and Problem Solving



I know the angle is not obtuse.



Max

I know the angle is acute.



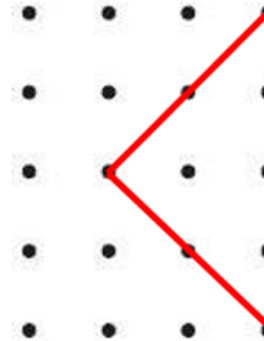
Tina

I think the angle is roughly 45° .



Jess

Who do you agree with? Explain why.



Is the angle acute, obtuse or a right angle?

Can you prove it?

Find the total number of degrees of the largest acute angle and the smallest obtuse angle:

12° 98° 87° 179° 90° 5°

Compare & Order Angles

Reasoning and Problem Solving

Jannat looks at the analogue clock four times during the morning.

The times she sees are:

Eight o'clock

Five past 11

Twenty to eleven

08:15

Draw the times on the clock faces and find the angles less than 180 degrees.



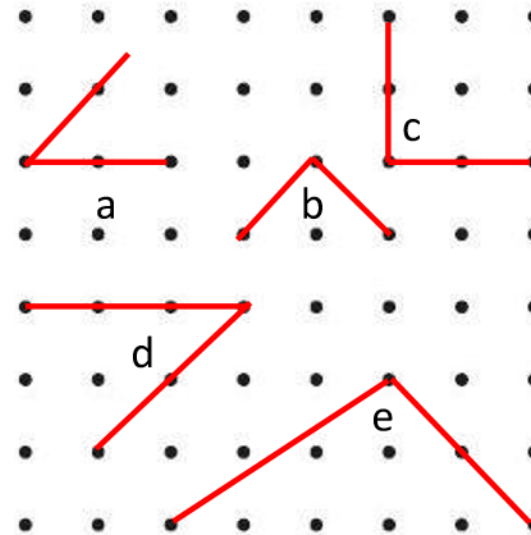
Order the angles from greatest to smallest.

Here are five angles.

There are two sets of identical sized angles and one odd one out.

Which angle is the odd one out?

Prove it.



Identify Angles

Reasoning and Problem Solving



I know the angle is not obtuse.



Max

I think the angle is roughly 45° .



Jess

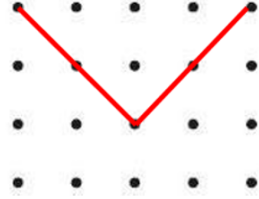
I know the angle is acute.



Tina

All are correct. Children may reason about how Jess has come to her answer and discuss that the angle is about half a right angle. Half of 90 degrees is 45 degrees.

Who do you agree with? Explain why.



Is the angle acute, obtuse or a right angle?
Can you prove it?

Find the total number of degrees of the largest acute angle and the smallest obtuse angle:

12° 98° 87° 179° 90° 5°

The angle is a right angle.
Children may use an angle tester to prove it, or children may be able to draw an extra line to prove that it is a quarter turn which is the same as a right angle.

$$87^\circ + 98^\circ = 185^\circ$$

Compare & Order Angles

Reasoning and Problem Solving

Jannat looks at the analogue clock four times during the morning.

The times she sees are:

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Five past 11

08:15

Draw the times on the clock faces and find the angles less than 180 degrees.



Order the angles from greatest to smallest.

Greatest to smallest



08:15



Eight o'clock

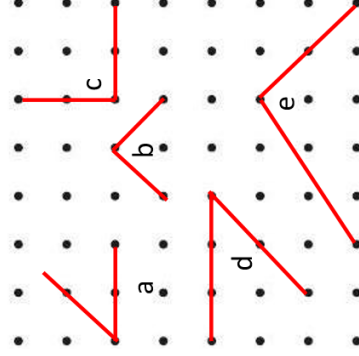


Twenty to eleven



Five past 11

Here are five angles.
There are two sets of identical sized angles and one odd one out.
Which angle is the odd one out?
Prove it.



Angle e is the odd one out.

Angle b and c are both right angles.

Angle a and d are both half of a right angle 45 degrees.

Angle e is an obtuse angle.

