

Tuesday Maths

L.O. To recognise and compare different angles

Mathematical Talk

What is an acute? (Give 3 examples of acute angles and ask them to identify what's the same about them. Draw out that they are all smaller than a right-angle).

What's an obtuse angle? (Repeat activity by giving 3 examples of obtuse angles).

Can you give me a time where the hands on the clock make an acute/obtuse angle?

Can you see an acute/obtuse angle around the classroom?

Can you draw me a shape that contains acute/obtuse angles?

Flashback: How much can you remember?

1) How many degrees are there in two full turns?

2) How many hours and minutes are there between 06:45 and 14:15?

3) How many more hours is Monday to Friday compared to Saturday and Sunday?

4) Complete. $4 \square$

$$\begin{array}{r} \times \quad 5 \\ \hline 2 \ 2 \ 5 \end{array}$$



Flashback: Answers

1) How many degrees are there in two full turns?

720



2) How many hours and minutes are there

between 06:45 and 14:15? 7 hours and 30 minutes

3) How many more hours is Monday to Friday compared to Saturday and Sunday? 72

4) Complete. 4 5

$$\begin{array}{r} \times \quad 5 \\ \hline 225 \end{array}$$

Learn:

Watch this video to give you a good understanding about angles.
<https://vimeo.com/430336836>

An **angle** is the space between two lines that start at the same point. We measure angles in degrees. The degree symbol looks like this $^{\circ}$. We show it next to a number like this 90° .

Types of angles

Angles can be between 0° and 360° (which is a full circle) and depending on the size of the angle, they are called different things:

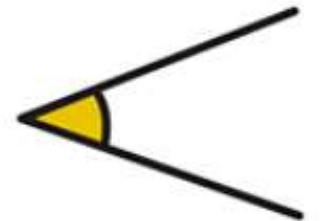
A **right angle** looks like the corner of a square or the edge of a book.

It is a perfect 90° , which is often shown by a small square drawn in between the two lines.



An **acute angle** is an angle that is less than 90° . This makes them smaller than a right angle.

A good way to remember this angle is to think that because it is small, it is “a cute” angle.



An **obtuse angle** is an angle that is bigger than 90° degrees, but doesn't reach a straight line at 180° .

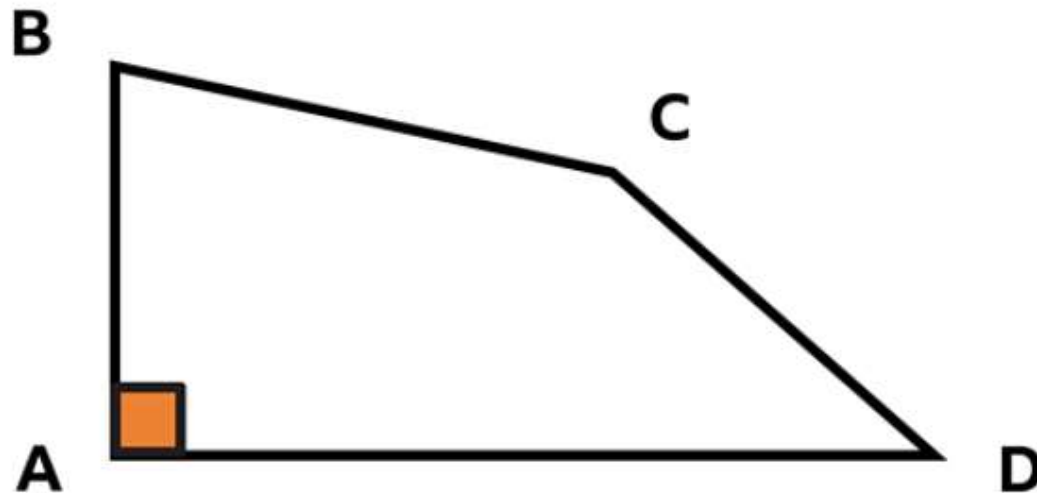


When you compare two angles, you have to think to yourself, is it smaller or bigger than 90° ?

Example 1:

Look at this shape, known as a **quadrilateral** (a four-sided, two-dimensional shape).

Angle **A** is a right angle.



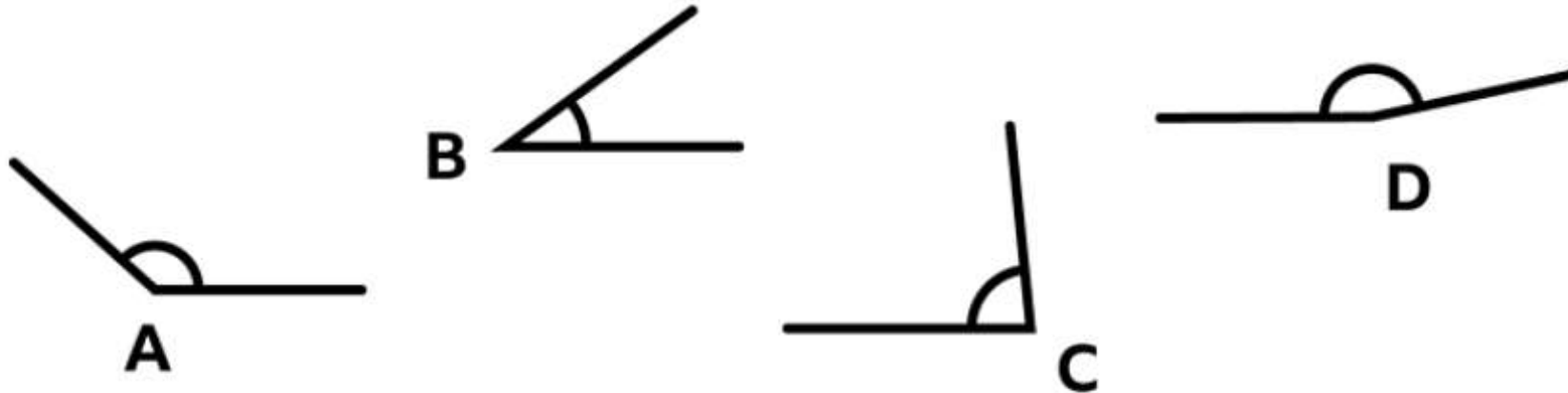
Which angles are acute angles?

Look carefully at the other angles and compare them to the right angle. Which angles are smaller?

- B and D are acute angles because they're clearly smaller than a right angle.
- That means angle C is an obtuse angle because it is larger than angle A.

Example 2:

Are any of the angles below **obtuse**?



Compare each angle to a right angle again - which are bigger than 90° ?

- A and D are obtuse since they're clearly larger than a right angle.
- B and C are acute angles then.

Complete the tasks below, they get harder as you go so see how much you can complete!

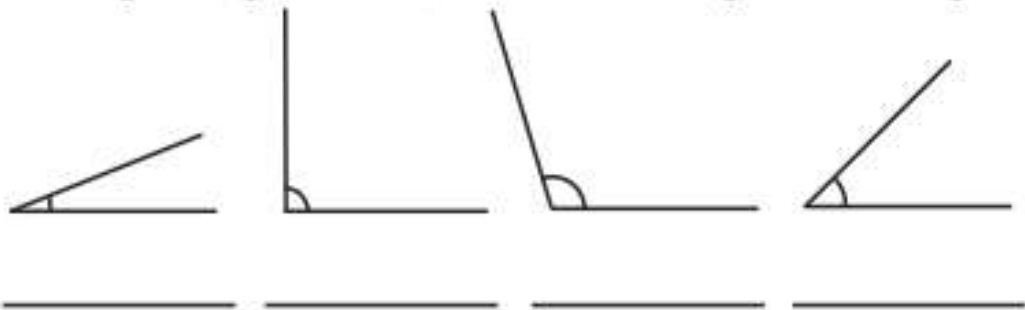
1) Complete these sentences:

An angle less than a right angle is called an _____ angle.



An angle greater than a right angle, but less than 180° , is called an _____ angle.

2) Label each of these angles as obtuse, acute or a right angle. In your book, draw and label your own angle.

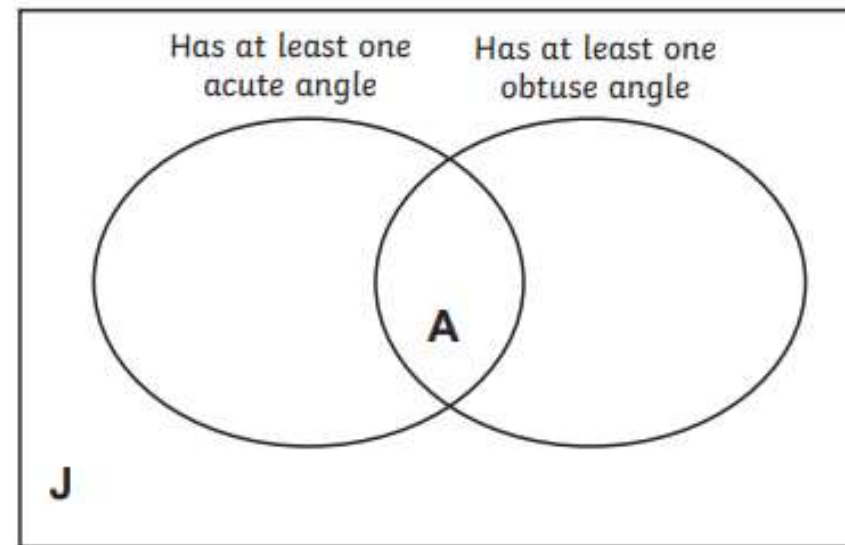


1) Are the angles between the hour and minute hands on these clocks obtuse, acute or right angles?



2) Place these letters correctly in the Venn diagram:

K E M T C Y



Challenge:

- 1) In your book, draw a shape with two obtuse and two acute angles.
- 2) Nikolas and Carla describe this shape differently:



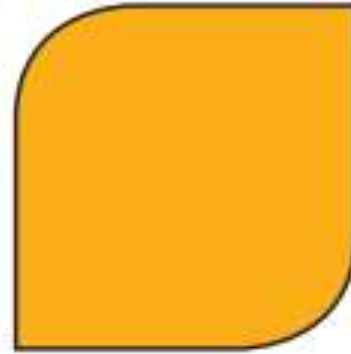
Nikolas

This shape has four right angles. Two of them are curved.



Carla

This shape has two right angles.

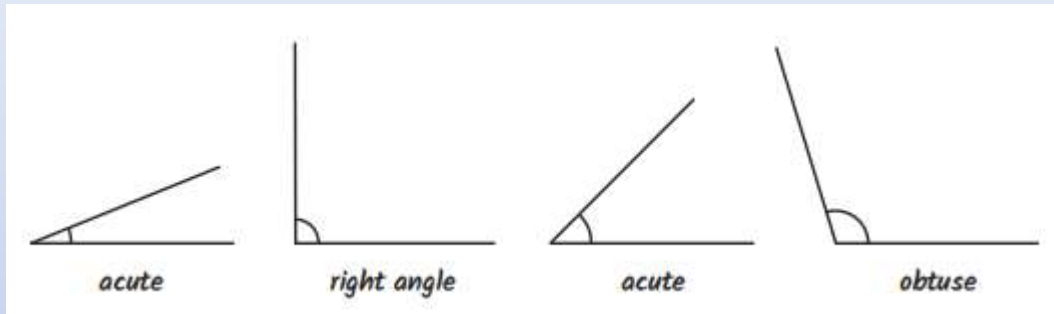


Who do you agree with? Explain why.

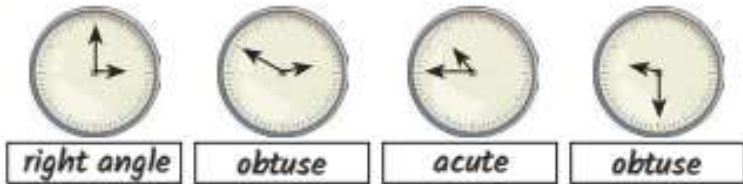
Answers:

1) acute, obtuse

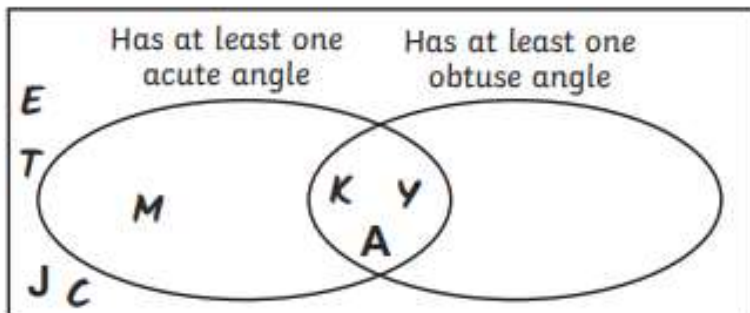
2)



1)

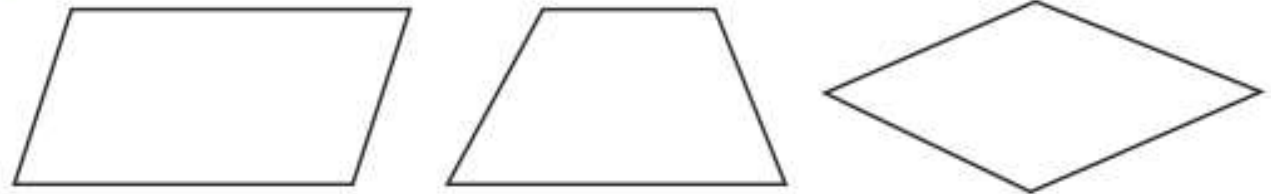


2)



Challenge Answers:

1) Multiple answers possible, such as:



2) Carla. Angles are formed where straight lines meet so this shape only has two angles.