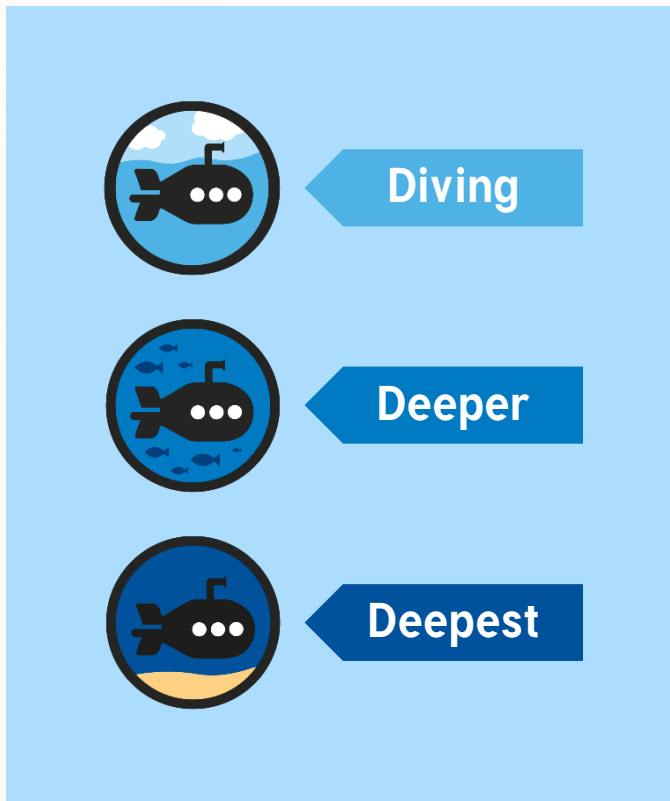


# Identify Angles

# Diving into Mastery Guidance for Educators

Each activity sheet is split into three sections, diving, deeper and deepest, which are represented by the following icons:



These carefully designed activities take your children through a learning journey, initially ensuring they are fluent with the key concept being taught; then applying this to a range of reasoning and problem-solving activities.

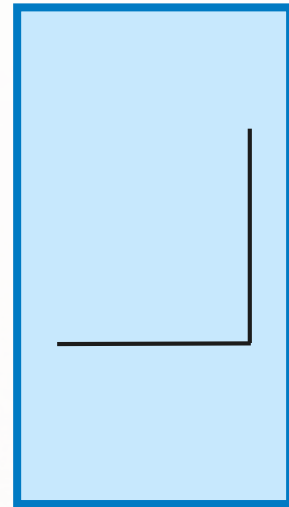
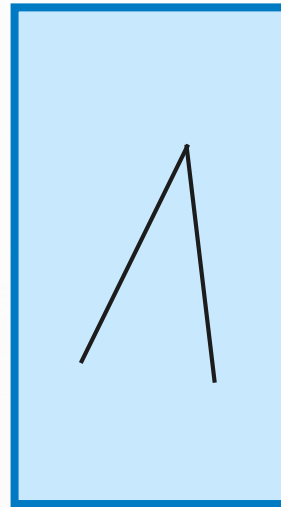
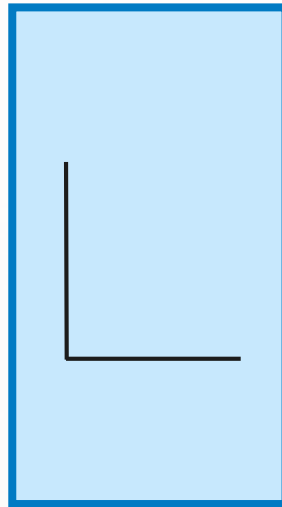
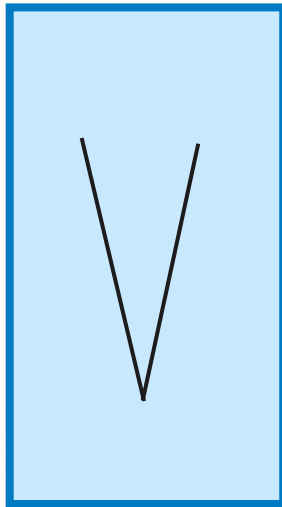
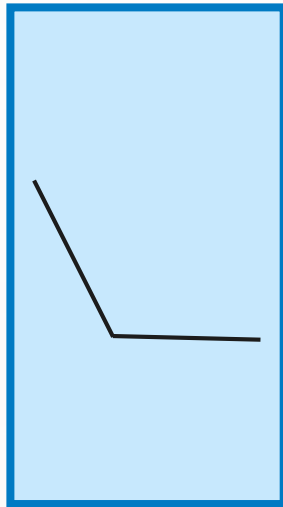
These sheets might not necessarily be used in a linear way. Some children might begin at the 'Deeper' section and in fact, others may 'dive straight in' to the 'Deepest' section if they have already mastered the skill and are applying this to show their depth of understanding.

# National Curriculum Objective

- Identify acute and obtuse angles and compare and order angles up to two right angles by size.



Which angles are acute?



What other types of angle can you identify above?

*one obtuse angle and two right angles*



Look at this trapezium.  
What types of angles can you see inside it?

*obtuse*

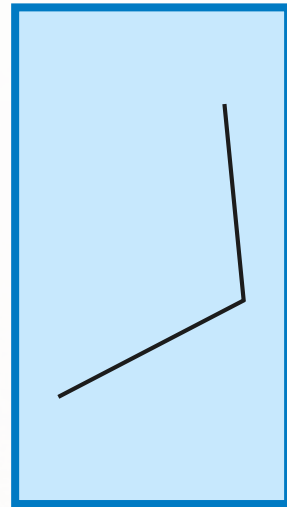
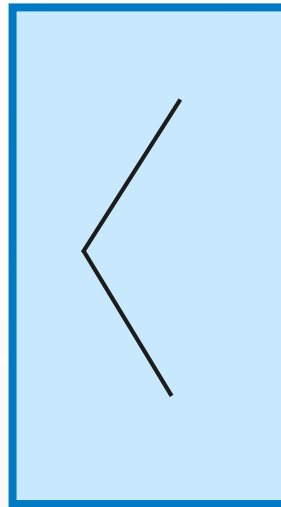
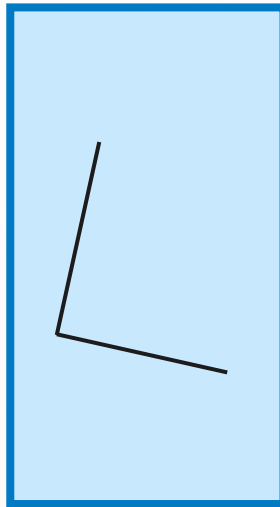
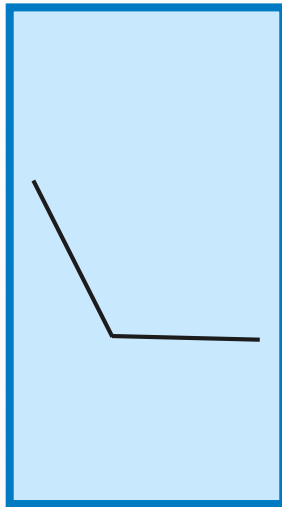
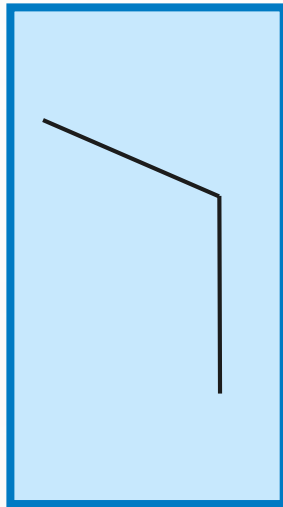
*obtuse*

*acute*

*acute*



Which angle is the odd one out?

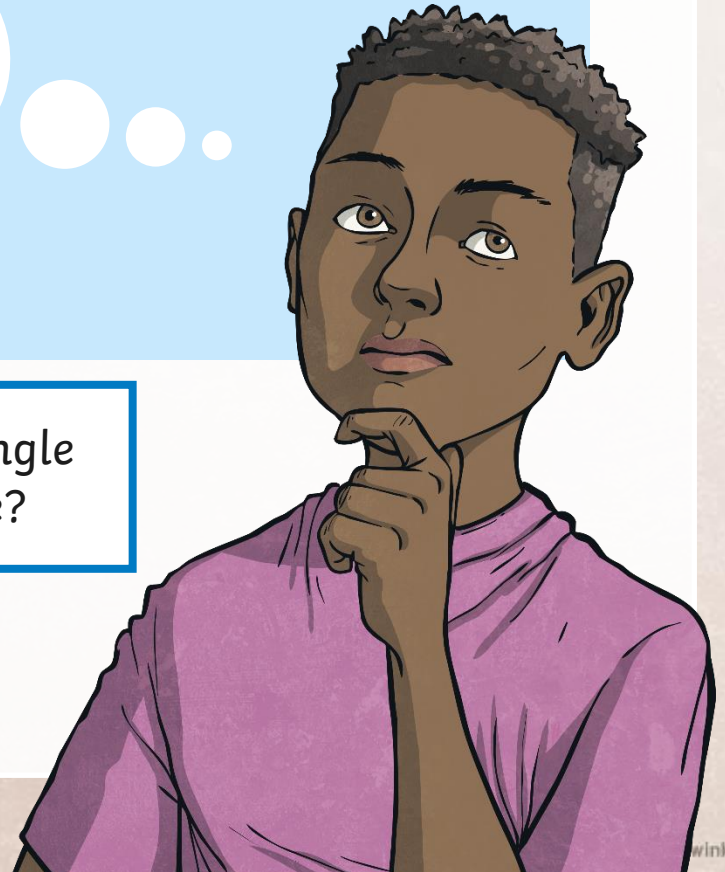


Why?

*It's the only angle that isn't obtuse; it's a right angle.*



Is it possible to draw a right-angled triangle where one of the other angles is obtuse?





*The angles in a triangle always total 180 degrees. Therefore, in a right-angled triangle, the right angle is 90 degrees, making it impossible for either angles to be obtuse.*





Which of these statements about a kite is:

- a) never true?
- b) always true?
- c) sometimes true?



A kite has two equal angles.

*always true*

A kite has four right angles.

*never true*

A kite has two equal obtuse angles.

*sometimes true*



A right angle is  $90^\circ$ .

An obtuse angle is greater than  $90^\circ$  but smaller than  $180^\circ$ .

An acute angle is smaller than  $90^\circ$ .

Using these facts, what is the smallest number of degrees you could add to  $45^\circ$  to make an obtuse angle? How do you know?

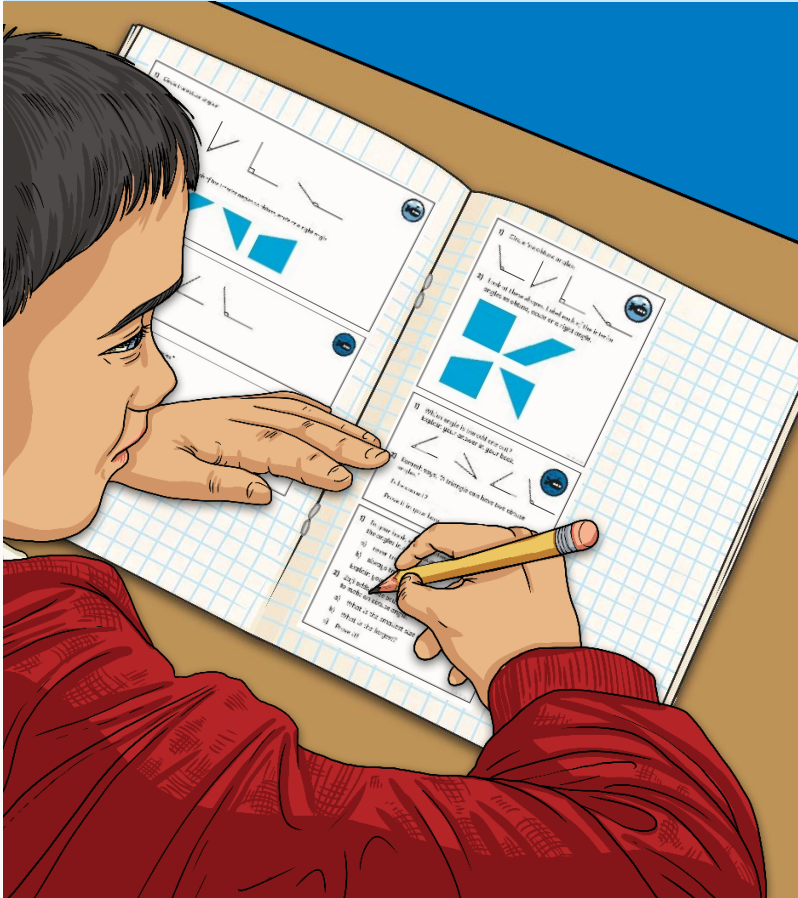
$46^\circ$

*The smallest obtuse angle  
must be  $91^\circ$  and  $45 + 46 = 91$ .*



# Identify Angles

Dive in by completing your own activity!



1) Circle the obtuse angles:



2) Look at these shapes. Label each of the interior angles as obtuse, acute or a right angle.



1) Which angle is the odd one out?



Explain your answer:

\_\_\_\_\_

\_\_\_\_\_

2) Ramesh says, "A triangle can have two obtuse angles."

Is he correct? \_\_\_\_\_

Prove it!

\_\_\_\_\_

\_\_\_\_\_

