

# Discussion Problems

## Step 1: Identify Angles

### National Curriculum Objectives:

Mathematics Year 4: (4G4) [Identify acute and obtuse angles and compare and order angles up to two right angles by size](#)

### About this resource:

This resource has been designed for pupils who understand the concepts within [this step](#). It provides pupils with more opportunities to enhance their reasoning and problem solving skills through more challenging problems. Pupils can work in pairs or small groups to discuss with each other about how best to tackle the problem, as there is often more than one answer or more than one way to work through the problem.

There may be various answers for each problem. Where this is the case, we have provided one example answer to guide discussion.

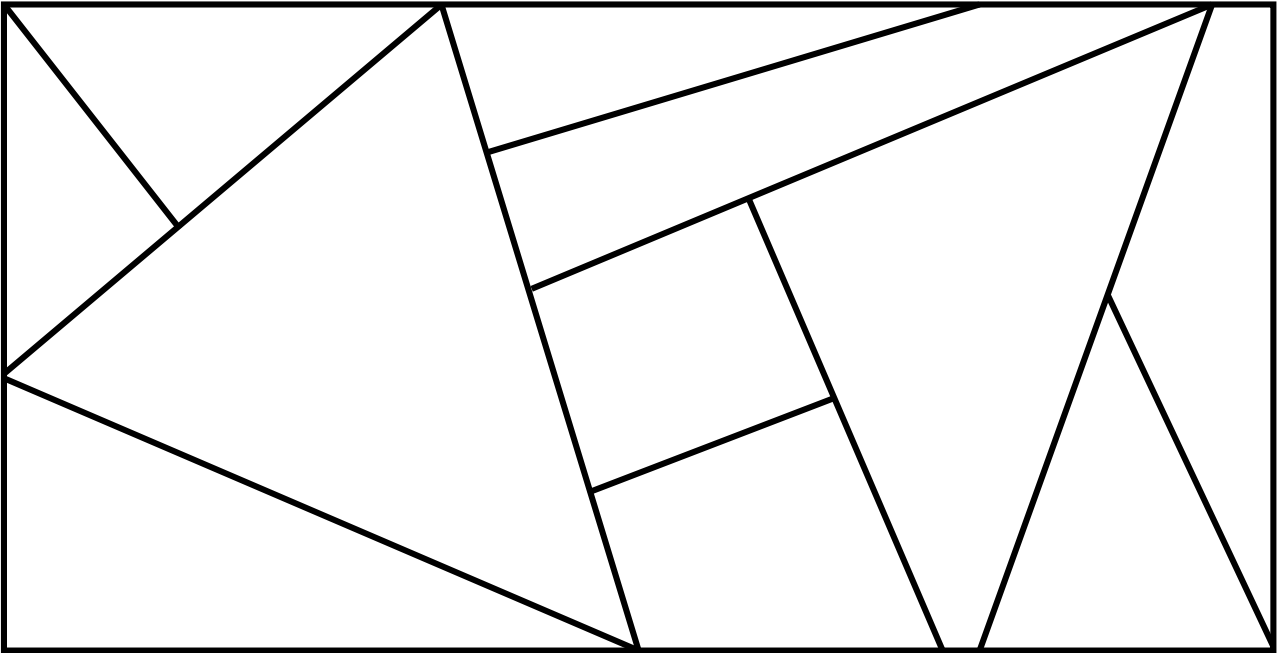
We recommend self or peer marking using the answer page provided to promote discussion and self-correction.

More [Year 4 Properties of Shape](#) resources.

Did you like this resource? Don't forget to [review](#) it on our website.

## Identify Angles

1. Explore how many obtuse, acute and right angles there are within the image below.



*Angles not drawn to scale*

DP

2. Find different combinations of the degrees below which create acute, obtuse and right angles. You can use each of the degrees multiple times.

a  $10^\circ$       b  $22^\circ$       c  $80^\circ$

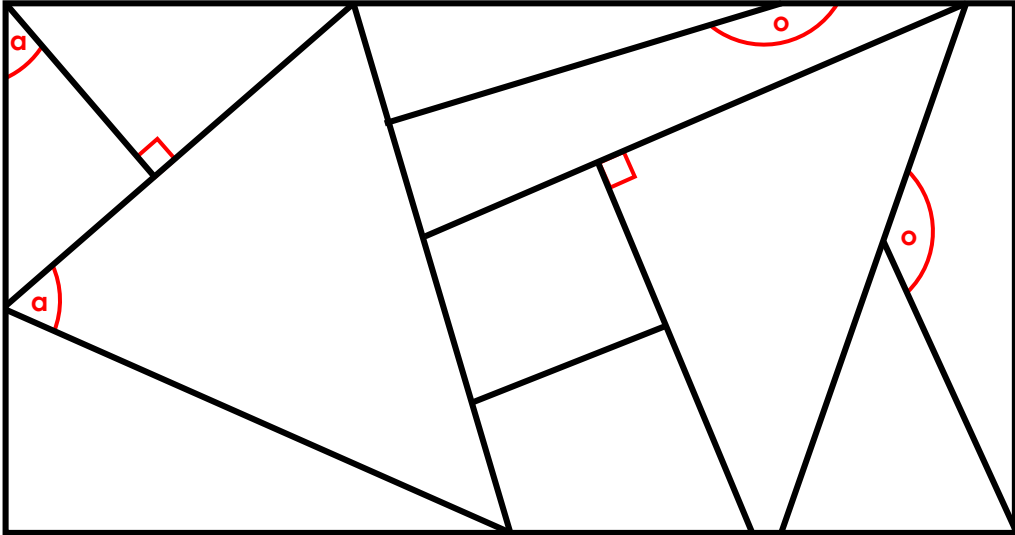
d  $60^\circ$       e  $54^\circ$

f  $39^\circ$

DP

## Identify Angles

1. Explore how many obtuse, acute and right angles there are within the image below.



*Angles not drawn to scale*

Two of each angle have been identified in the image above. The actual numbers of each type of angle will depend on whether multiple angles are combined or counted separately.

DP

2. Find different combinations of the degrees below which create acute, obtuse and right angles. You can use each of the degrees multiple times.

a  $10^\circ$       b  $22^\circ$       c  $80^\circ$

d  $60^\circ$       e  $54^\circ$

f  $39^\circ$

Various combinations including:

Acute angle:  $10^\circ + 22^\circ = 32^\circ$

Obtuse angle:  $80^\circ + 45^\circ = 125^\circ$

Right angle:  $60^\circ + 10^\circ + 10^\circ + 10^\circ = 90^\circ$

DP