

Year 6



Mathematics

Reasoning - geometry

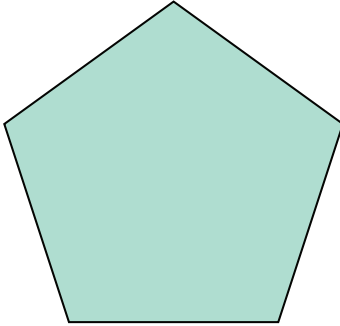
Understanding lines & angles

First name						
Middle name						
Last name						
Date of birth	Day		Month		Year	
School name						

1

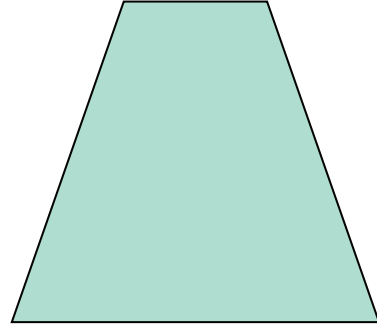
Here are four shapes.

Write the number of acute and obtuse angles each shape has.



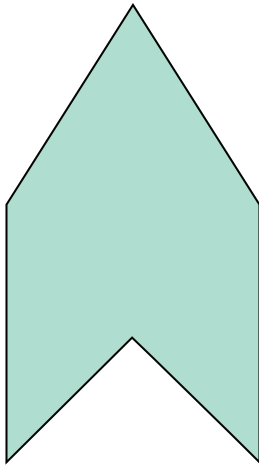
obtuse:

acute:



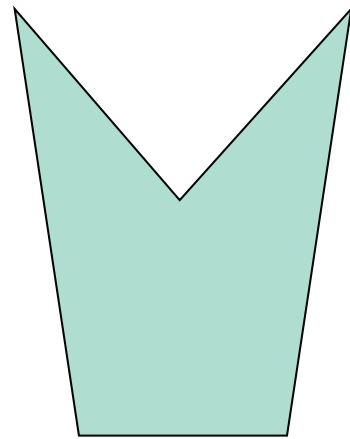
obtuse:

acute:



obtuse:

acute:



obtuse:

acute:

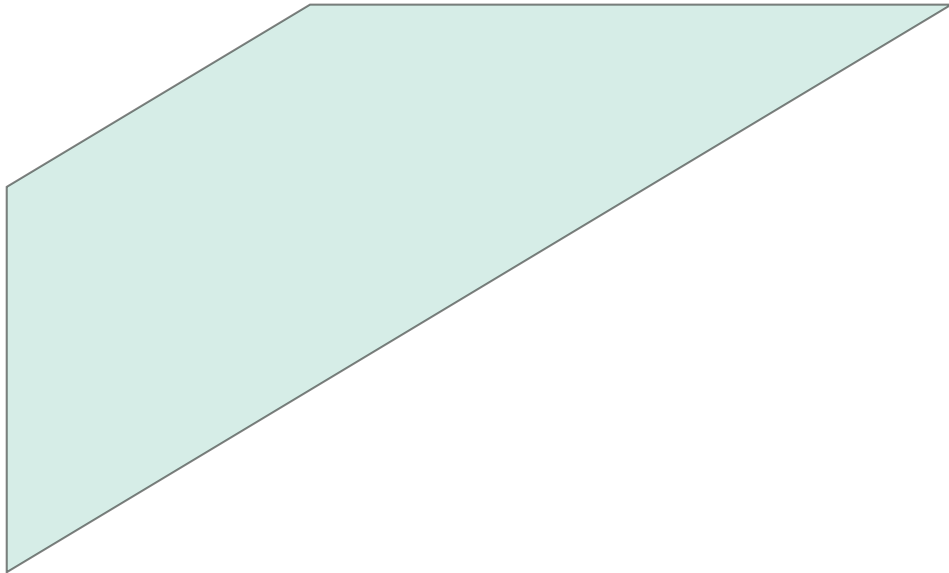


2 marks

2

Look at the shape below.

Tick all the obtuse angles.

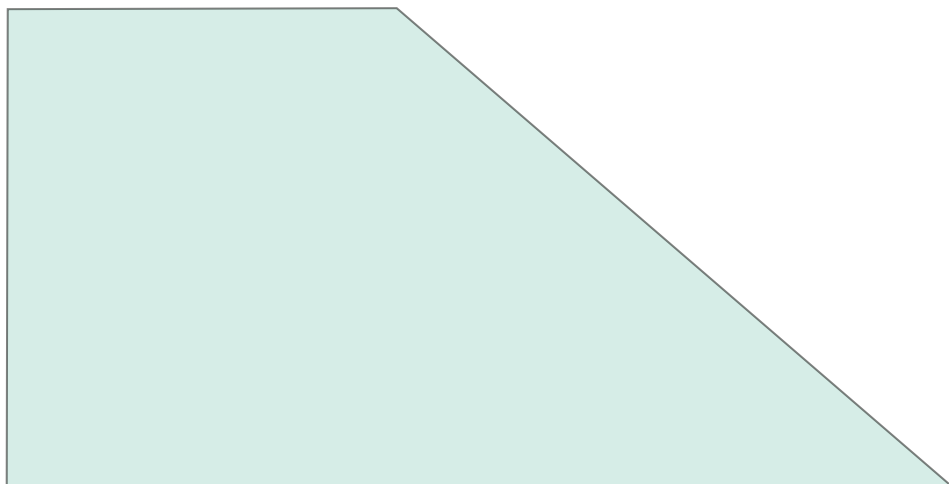


1 mark

3

Look at the shape below.

Tick all the acute angles.

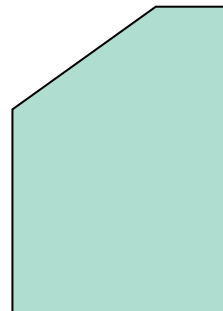
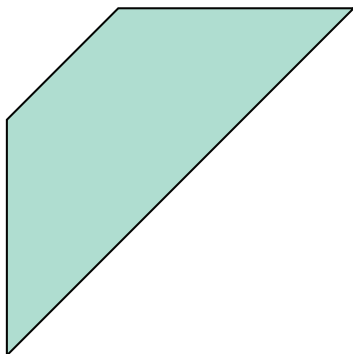
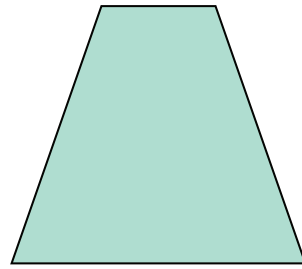
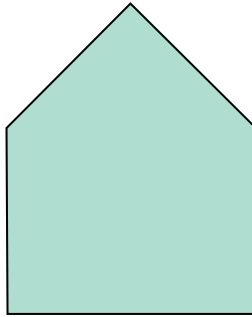
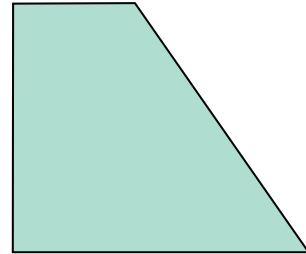
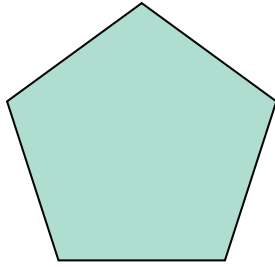


1 mark

4

Look at the shapes below.

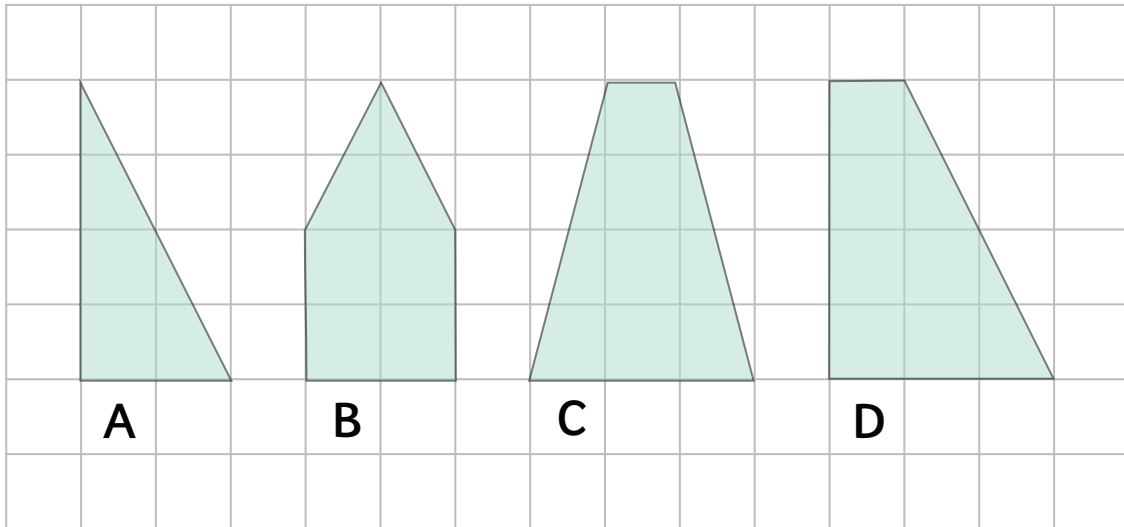
Tick the shapes that have both parallel and perpendicular lines.



2 marks

5

Here are some shapes on a square grid.



Write the letters of all the shapes that have a right angle.



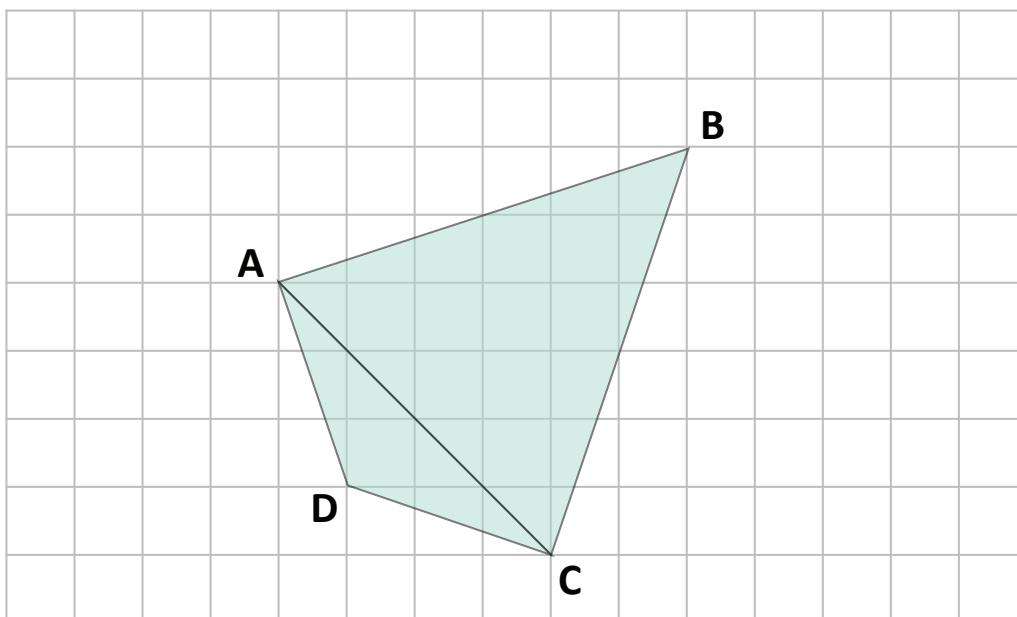


1 mark

6

A shape is drawn on the diagram below.

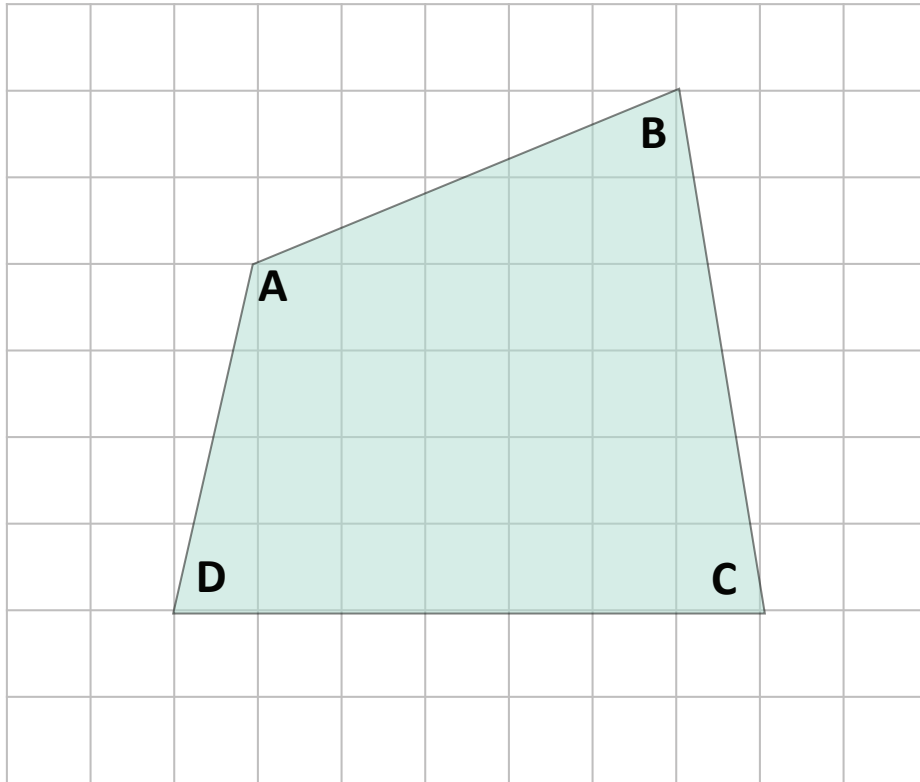
Join two letters to draw a line that is perpendicular to AC.



1 mark

7

Here is a shape.



Put a tick next to the statements that are true.

Angle B is a right angle.

Angle A is an obtuse angle.

Angle C is an acute angle.

Line AB is parallel to line DC.

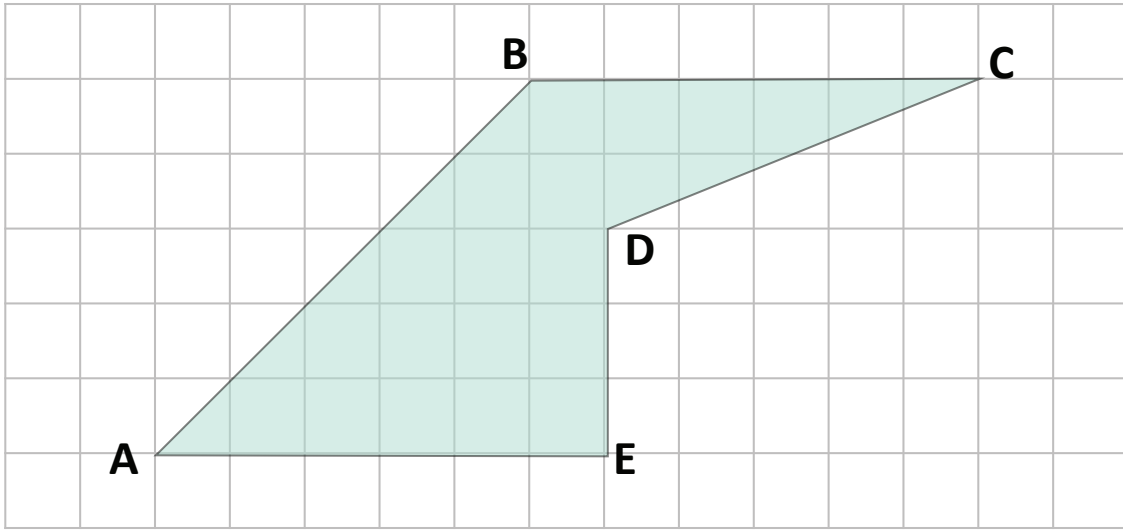


1 mark

8

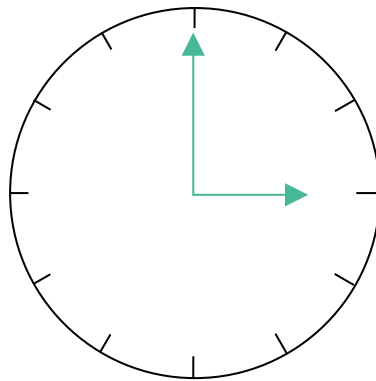
A shape is drawn on the grid below.

Join two letters to draw a line that is parallel to AB.



9

Look at the clock below.



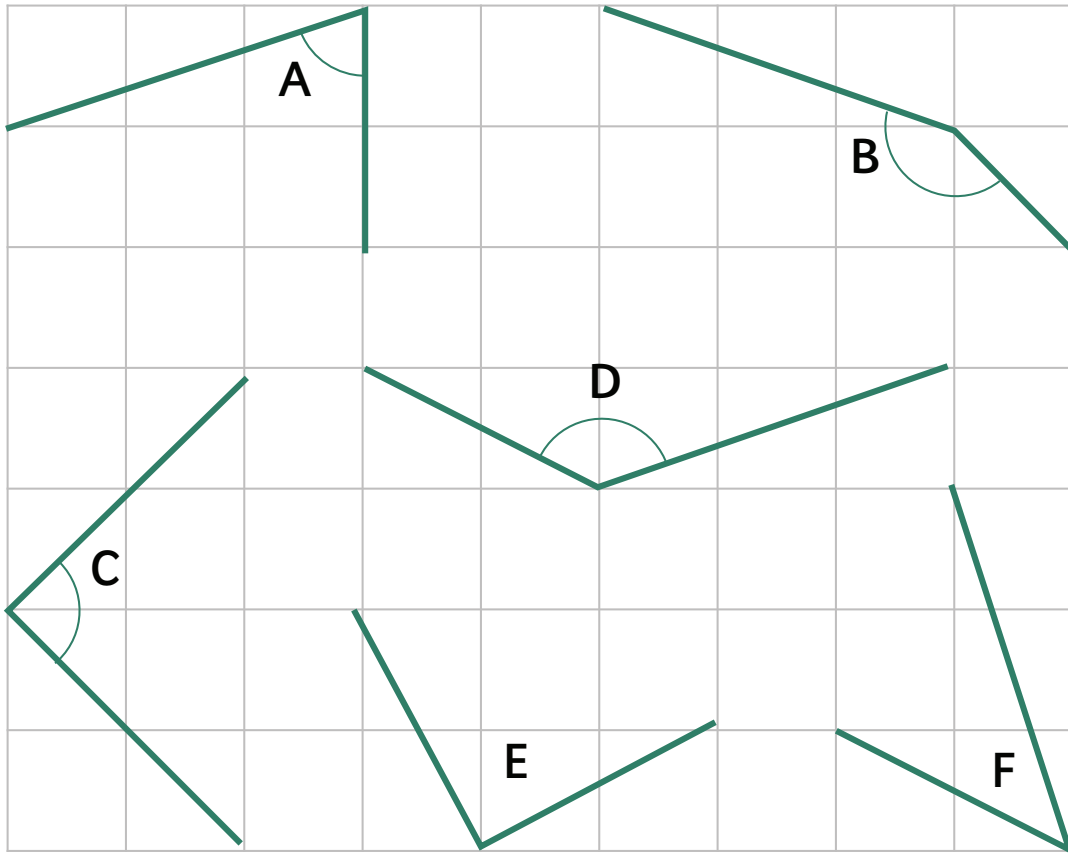
What is the angle between the hands of the clock?

What reflex angle is also shown by the hands of the clock?



2 marks

Here are some angles.



Write the letters of **all** the angles that are **acute**.





1 mark

Write the letters of **all** the angles that are **obtuse**.





1 mark

Write the letters of **all** the angles that are **right-angles**.

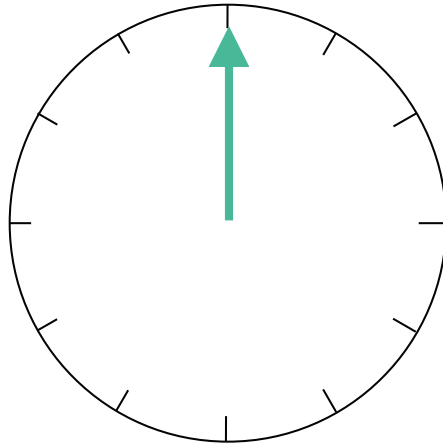




1 mark

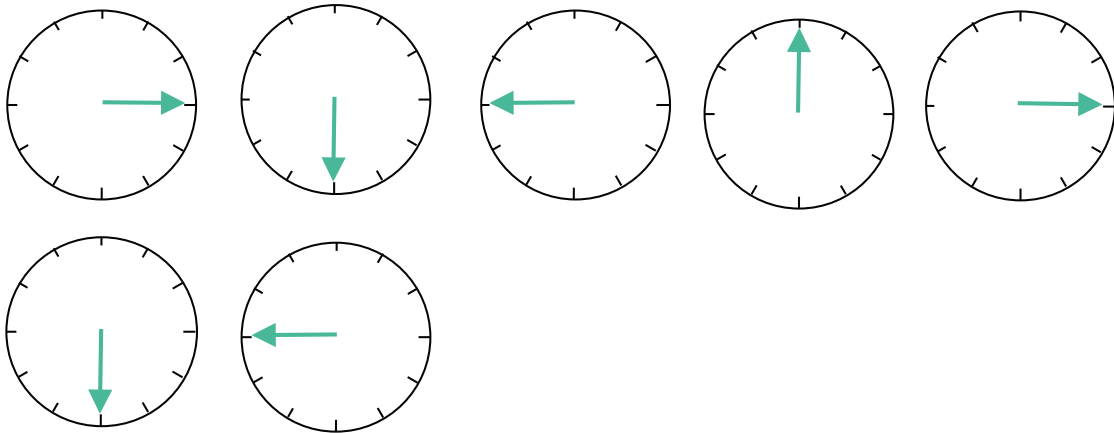
11

The diagram below shows an arrow on a timer.



The arrow moves through one and $\frac{3}{4}$ turns.

The diagrams below show the different positions it passes through



How many **degrees** does the arrow turn through?

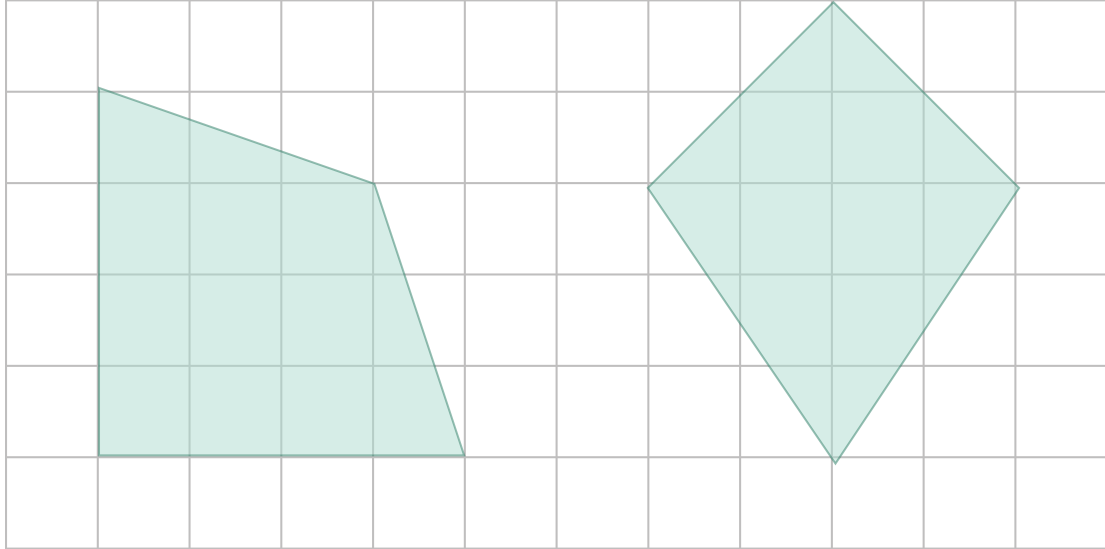


1 mark

12

Here are two shapes on a grid.

For each shape, write how many acute, obtuse and right angles it has.



acute:

obtuse:

right angle:

acute:

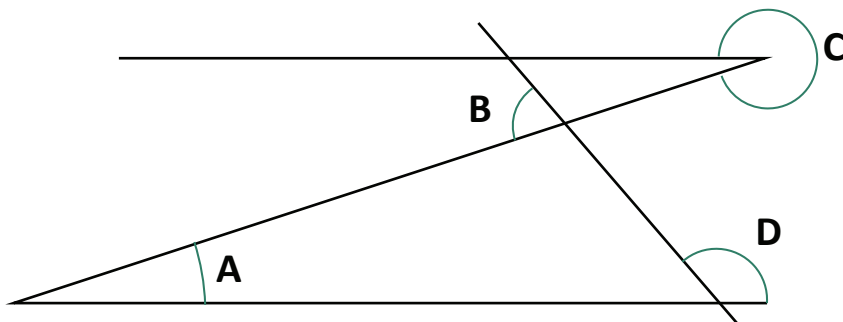
obtuse:

right angle:

2 marks

13

Here is a diagram with four angles marked A, B, C and D.

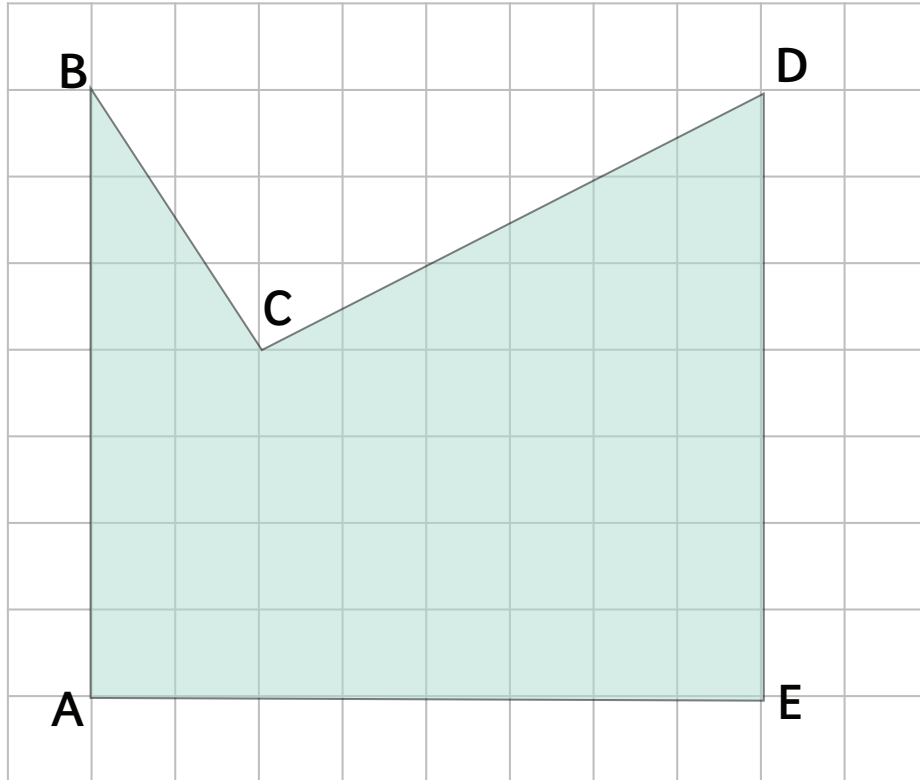


Write the letters of **all** the angles that are **acute**.



2 marks

Here is a shape.



Put a tick next to the statements that are true.

Line AB is perpendicular to line AE.

Angle A is a right angle.

Angles C and D are obtuse.

Line AB is parallel to line DE.

Angle B is the only acute angle.

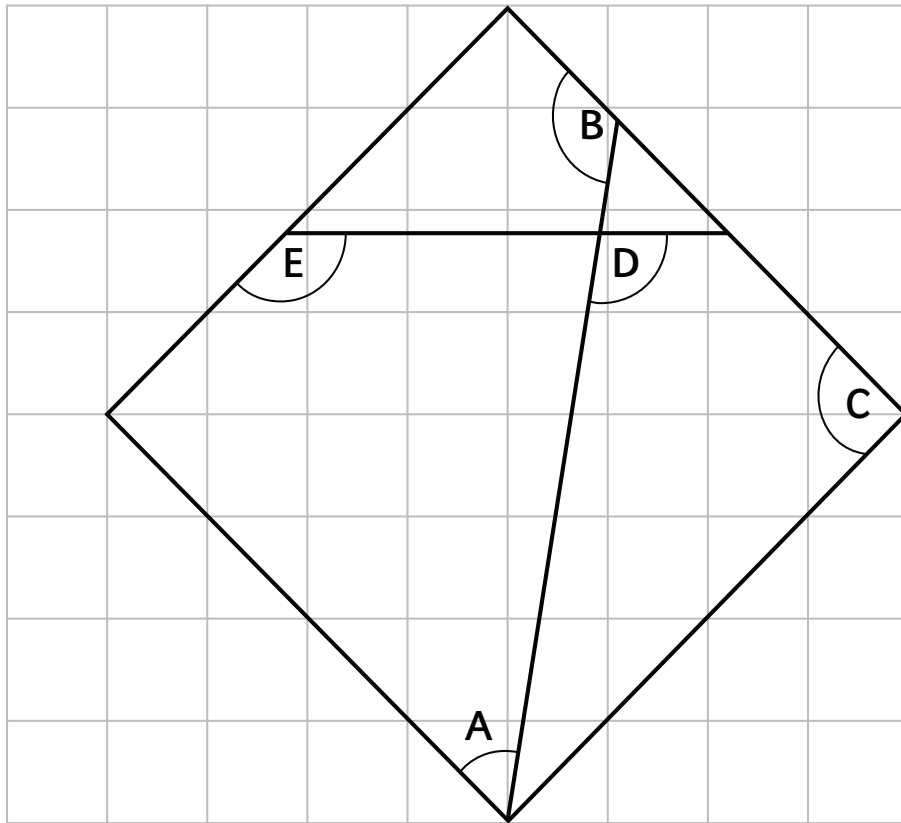
This shape contains a reflex angle.



2 mark

15

Here is a diagram with some angles marked A, B, C, D and E.



Write the letters of **all** the angles that are **acute**.





1 mark

Write the letters of **all** the angles that are **obtuse**.





1 mark

Write the letters of **all** the angles that are **right-angles**.



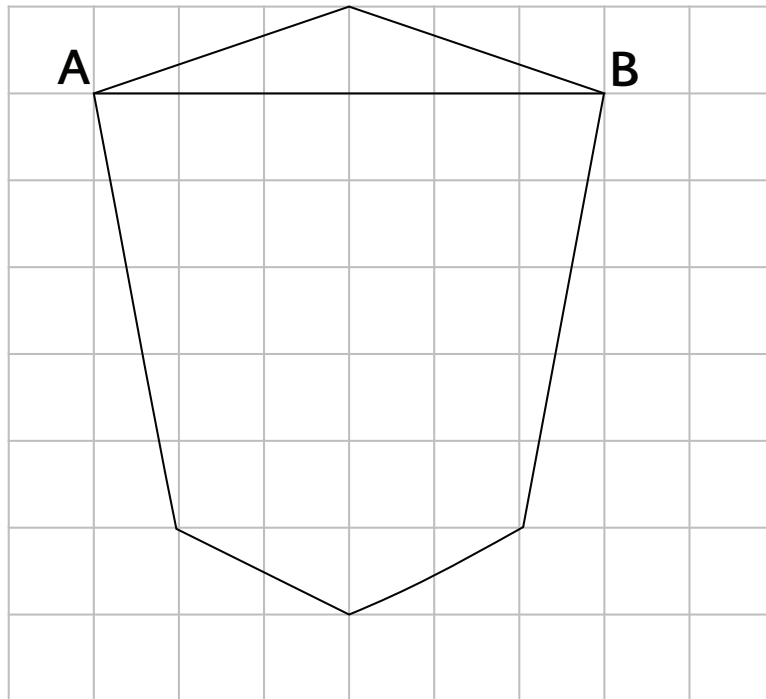


1 mark

16

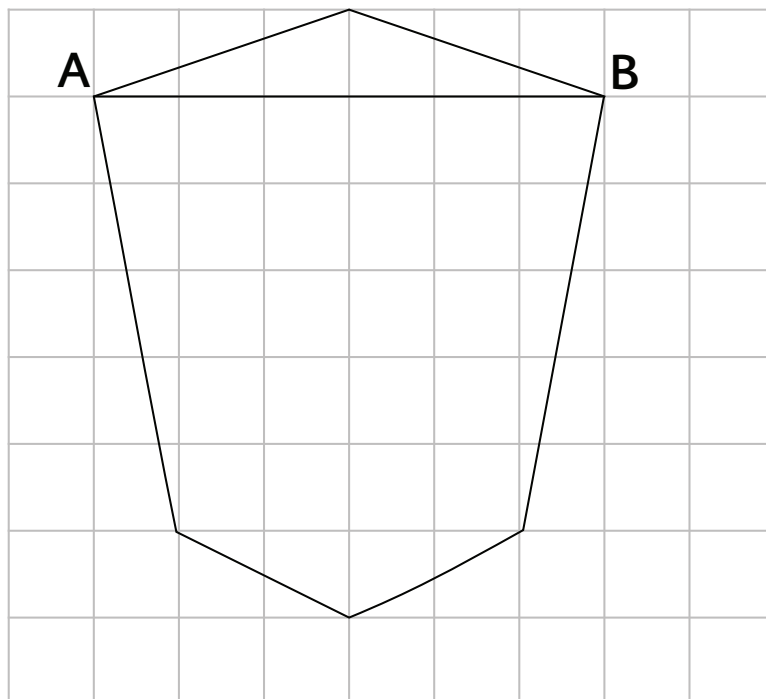
This diagram shows a shape on a square grid with a line, AB.

Join two other points to make a line **parallel** to line AB.



1 mark

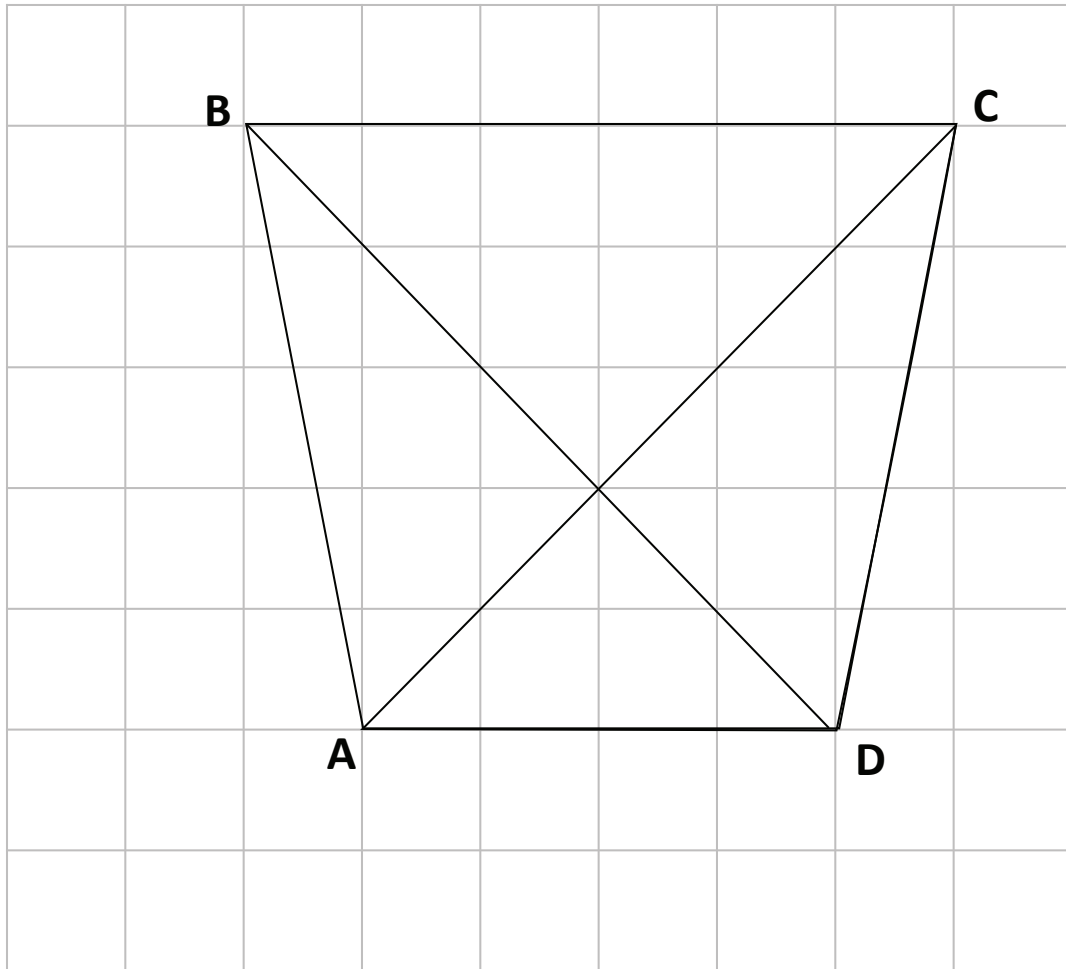
Join two other points to make a line **perpendicular** to line AB.



1 mark

17

Here is a diagram with 6 lines labelled: AB, BC, CD, AD, BD, AC



Write the letters of the lines that are **parallel**.





1 mark

Write the letters of the lines that are **perpendicular**.

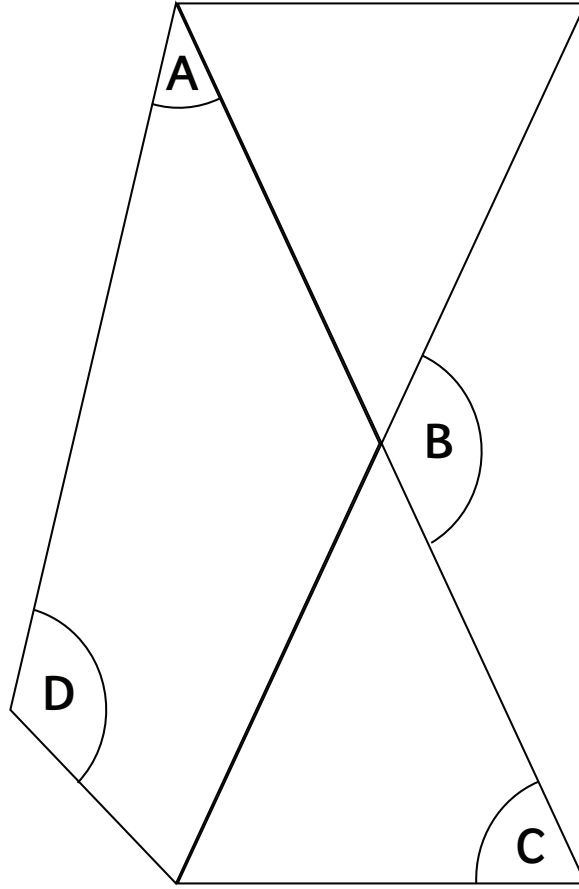




1 mark

18

Here is a diagram with some angles labelled.



Write the letters of all the angles that are **obtuse**.





1 mark

Write the letters of all the angles that are **acute**.



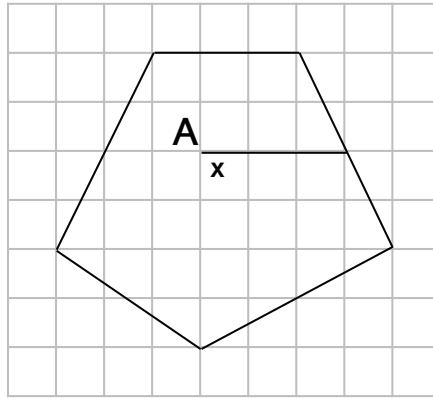


1 mark

19

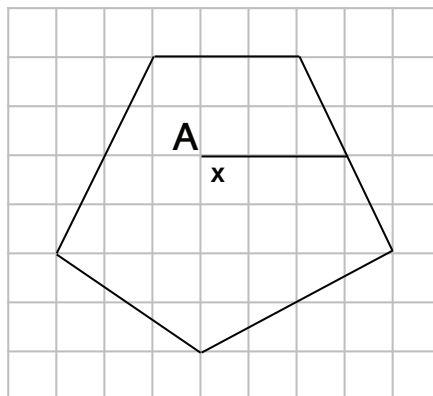
This diagram shows a shape on a square grid with an unfinished angle x .

Join point A to one other point to make angle x **acute**.



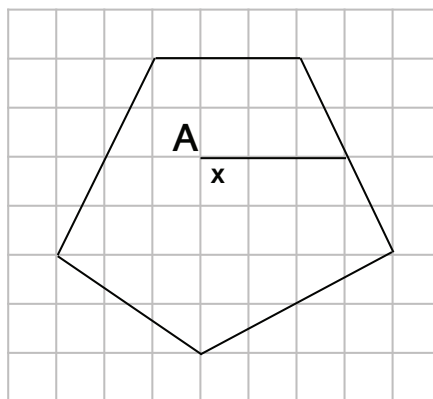
1 mark

Join point A to one other point to make angle x **obtuse**.



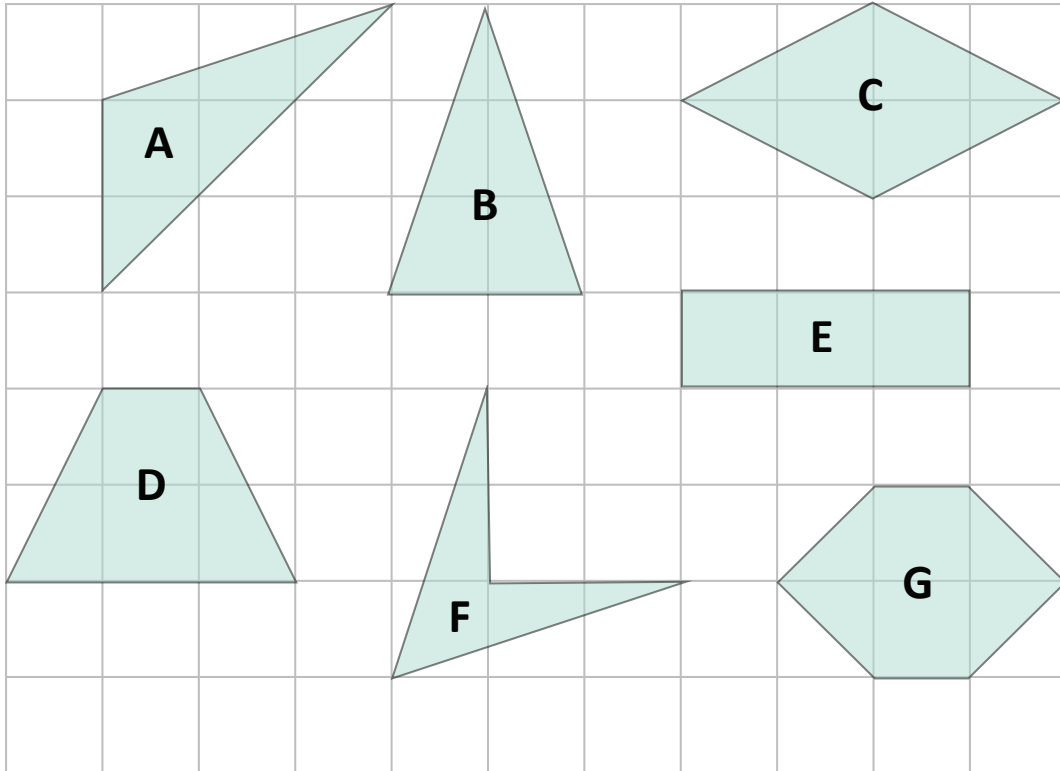
1 mark

Join point A to one other point to make angle x a **right angle**.



1 mark

Here are some shapes drawn on a grid.



Write the letter for each shape in the correct place on the sorting diagram.

