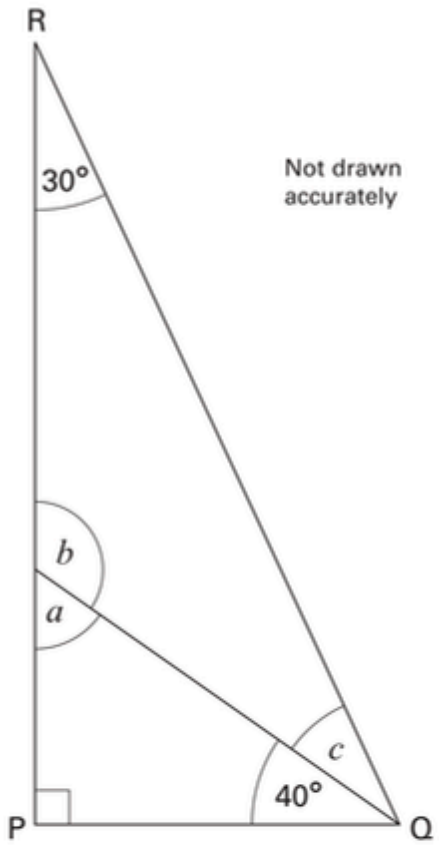
Angles and Properties of Shapes

Angle rules and shape properties are a KS3 maths staple — once you know the rules, these questions become quick wins in the exam!

The diagram shows triangle PQR.



Work out the sizes of angles a, b and c

. . . . 1 mark

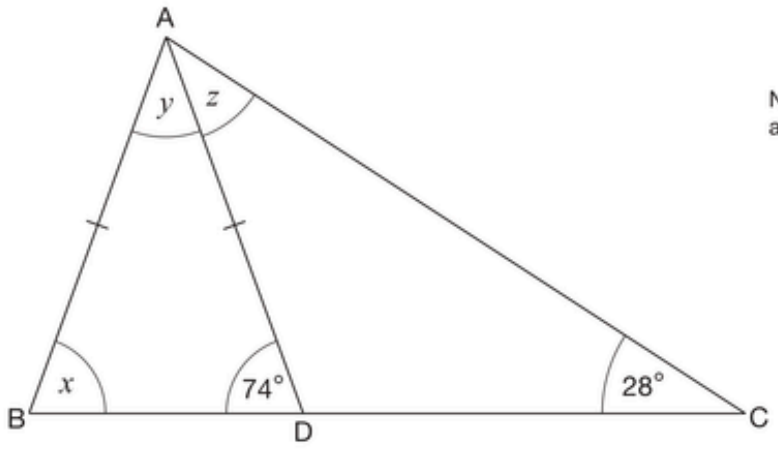
. . . . 1 mark

. . . . 1 mark

KS3 Maths SATs, Tier 3-5, Paper 1 (2005) - Q20

Look at triangle ABC.

ABD is an **isosceles** triangle where AB = AD.



Not drawn accurately

Work out the sizes of angles x, y and z

Give reasons for your answers.

$x =$ _____ ° because _____

_____

$y =$ _____ ° because _____

_____

$z =$ _____ ° because _____

_____

_____

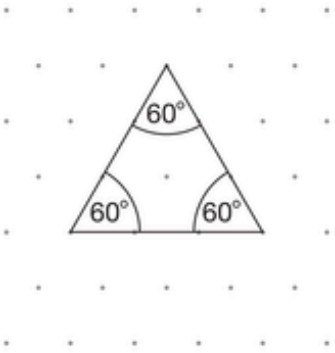
2 marks

Modern Tuition

(a) Look at the equilateral triangle.

Each angle in an equilateral triangle is 60°

Explain why.

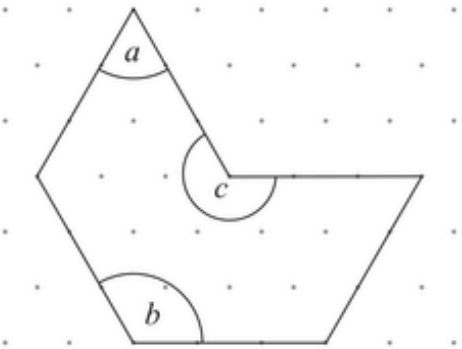


Isometric grid

1 mark

(b) Now look at this shape.

Work out the sizes of angles a, b and c



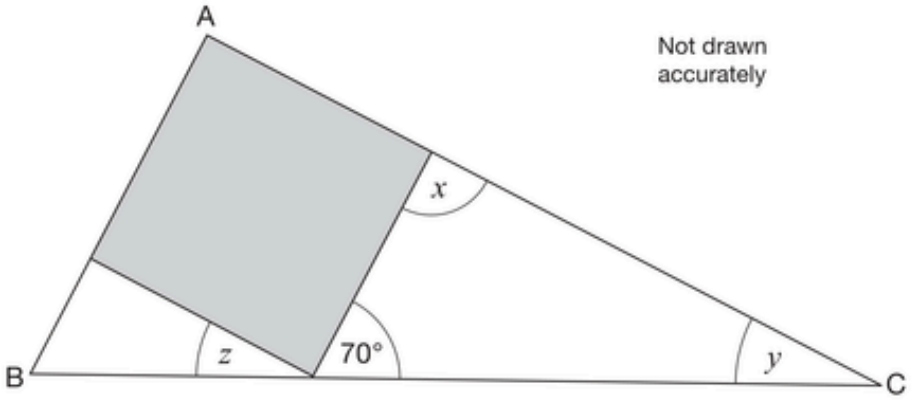
Isometric grid

$a =$ _____ ° $b =$ _____ ° $c =$ _____ °

2 marks

Modern Tuition

Look at the right-angled triangle ABC.



The square fits exactly inside the triangle.

Work out the sizes of angles x, y and z

$x =$ _____ °

$y =$ _____ °

$z =$ _____ °

3 marks

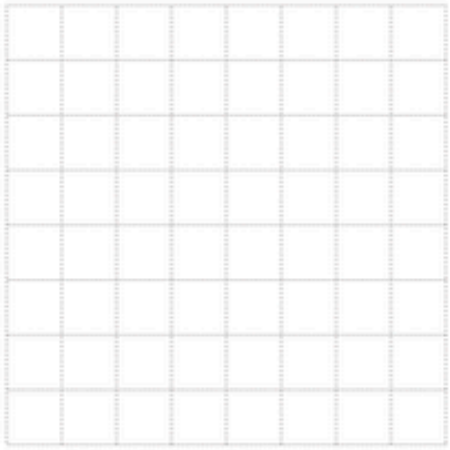
Modern Tuition

In this question, all the grids are square grids.

(a) On the grid, draw a **triangle with no right angles.**

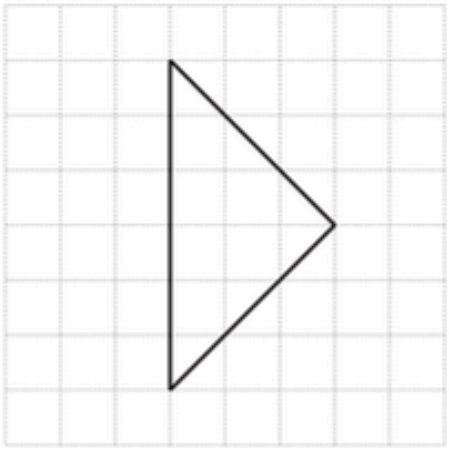
1 mark

(b) On the grid, draw a **quadrilateral with no right angles.**



1 mark

(c) **How many right angles** does the shape on this grid have?



Number of right angles: .....

1 mark

Modern Tuition