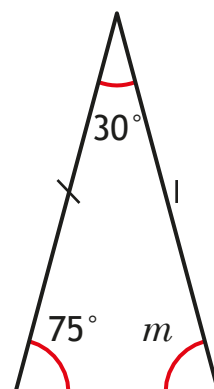


Angles in a triangle – special cases

1 Here is a triangle.



a) What type of triangle is it?

How do you know?

b) Work out the size of angle m .

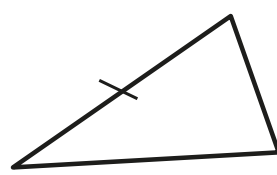
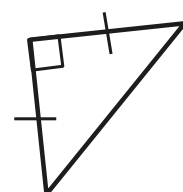
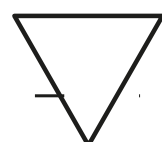
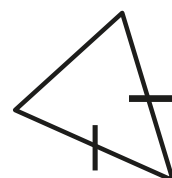
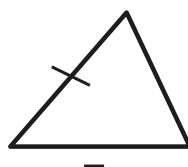
c) What do you notice?

d) Complete the sentence to describe the angles in an isosceles triangle.

In an isosceles triangle _____

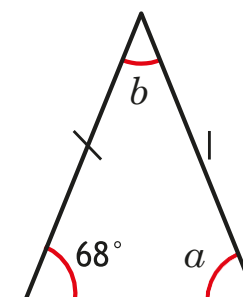


2 Identify and label the angles that will be equal in each triangle.



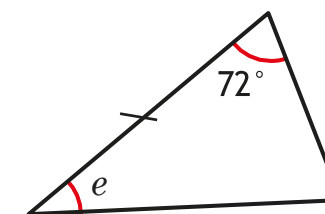
3 Work out the sizes of the unknown angles.

a)



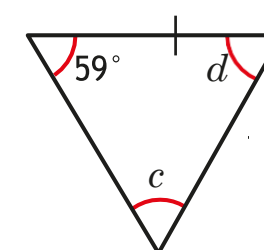
$a =$ $b =$

c)



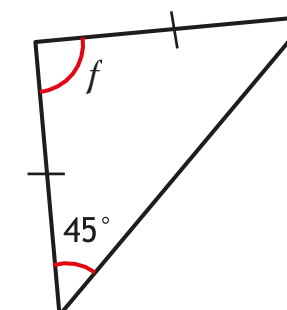
$e =$

b)



$c =$ $d =$

d)

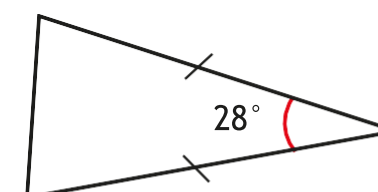


$f =$

Talk about your reasons with a partner.



4 Dexter is working out the unknown angles in triangles.



I can't work out either of the missing angles because I don't have enough information.



Do you agree with Dexter? _____

Explain your answer.

5 Work out the sizes of the unknown angles.

a)

$m =$

c)

$r =$

b)

$n =$

d)

$s =$

6 Whitney and Jack are working out the angles in this triangle.

Whitney

Jack

Who do you agree with? _____
 Talk about it with a partner.

7 Are the statements true or false?

- a) Every isosceles triangle is equilateral. _____
- b) Every equilateral triangle is isosceles. _____
- c) A right-angled triangle can be equilateral. _____
- d) A right-angled triangle can be isosceles. _____

Explain your answers to a partner.

8 Two angles in a triangle are 43° and 74° .

Is the triangle isosceles? _____
 Show your workings.

9 One angle in an isosceles triangle is 29° .

What could the other angles be? Give two possible answers.

10 Angle b is twice the size of angle a .
 Work out the size of angle c .