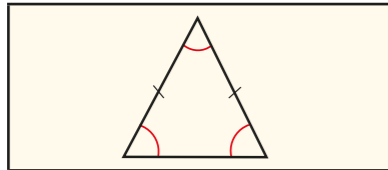
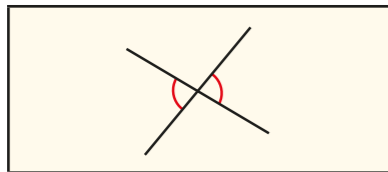


Solve angle problems using properties of triangles and quadrilaterals

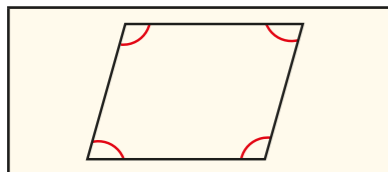
1 Match each diagram to the correct rule.



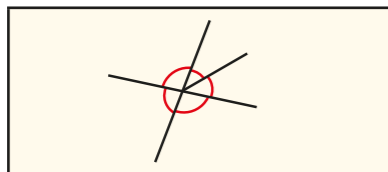
Angles on a straight line sum to 180°



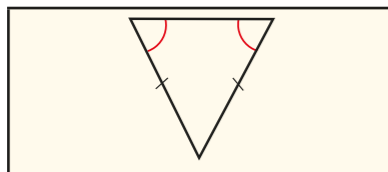
Angles around a point sum to 360°



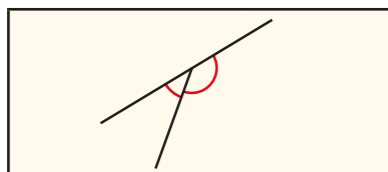
Angles in a triangle sum to 180°



In an isosceles triangle, two angles are equal

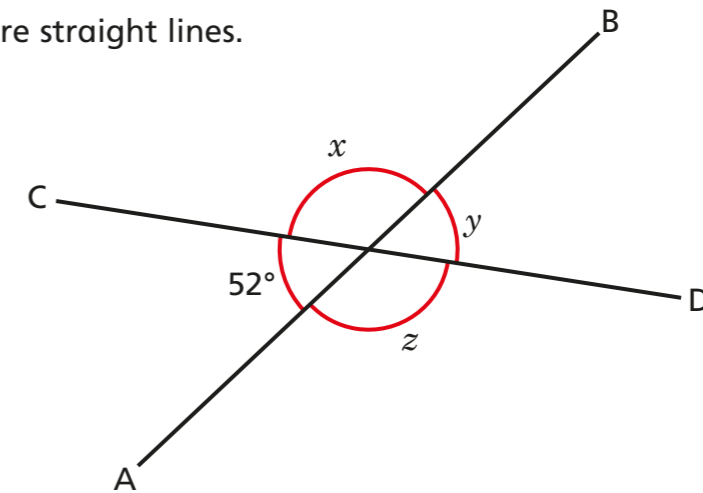


Vertically opposite angles are equal



Angles in a quadrilateral sum to 360°

2 AB and CD are straight lines.



Work out the sizes of angles x , y and z . Give reasons for your answers.

$x =$ because _____

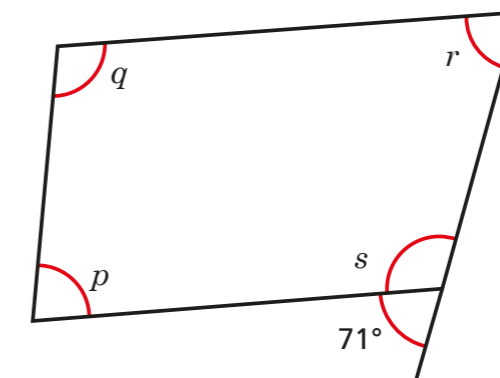
$y =$ because _____

$z =$ because _____

Compare your reasons with a partner.

Did you work out each angle in the same way?

3 Here is a quadrilateral.



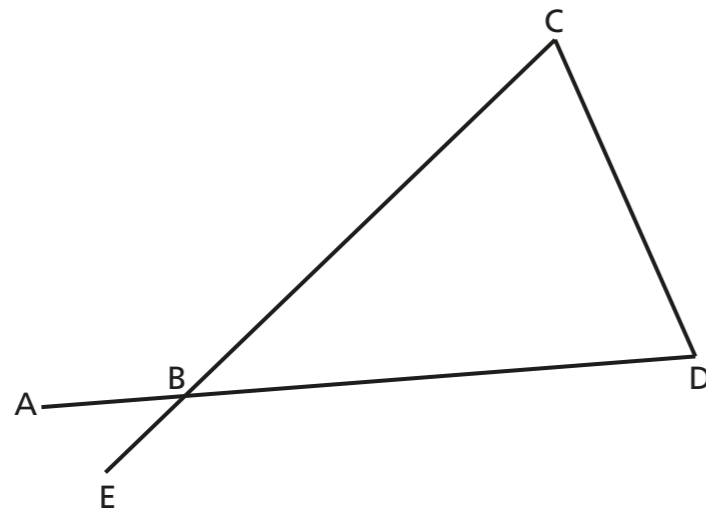
a) Work out the size of angle s . Give a reason for your answer.

$s =$ because _____

b) What is the sum of angles q , r and p ?

How do you know?

4



a) Angle ABE is 39° .
Label it on the diagram.

b) What is the size of angle ABC?
How do you know? _____

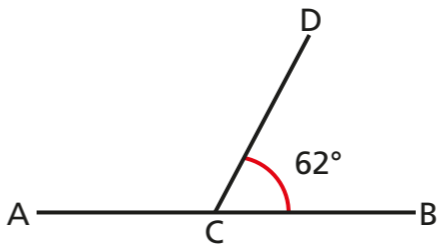
c) What is the size of angle CBD?
How do you know? _____

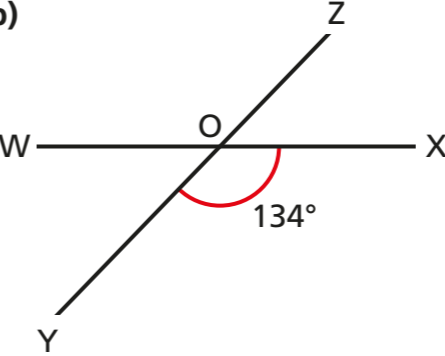
d) What is the sum of angles BCD and CDB?
How do you know? _____

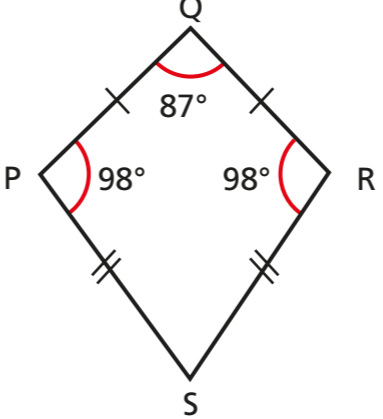
e) Angle BCD is 70° . Is triangle BCD isosceles? _____
Discuss with a partner.

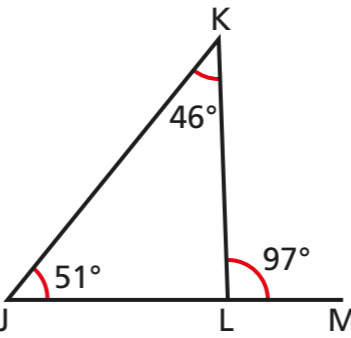
5

Complete the sentence for each diagram.
You must use correct mathematical vocabulary.

a)  Angle ACD is because _____

b)  Angle is 134° because _____

c)  Angle PSR is because _____

d)  Angle is 83° because _____
_____ or _____

