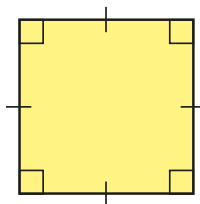


# Angles in special quadrilaterals

1 Work out the sum of the angles in each shape.

a)

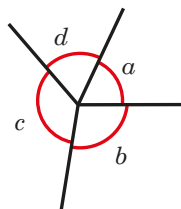
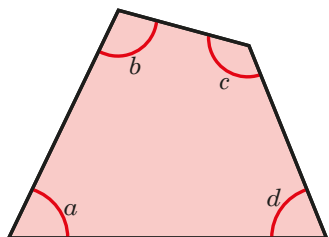



b)




What do you notice?

2 The diagrams show the four vertices of a quadrilateral arranged around a point.



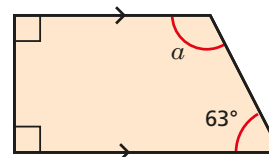
What do the diagrams illustrate about the sum of the angles in a quadrilateral?

Complete the sentence.

Angles in a quadrilateral \_\_\_\_\_

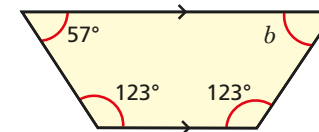
3 Work out the size of the unknown angle in each trapezium.

a)



$a = \boxed{\phantom{00}}$

b)

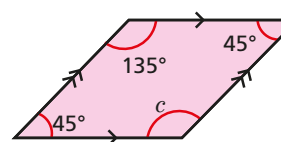


$b = \boxed{\phantom{00}}$

c) What is the same and what is different about the trapeziums?

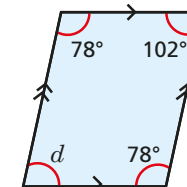
4 Work out the sizes of the unknown angles.

a)



$c = \boxed{\phantom{00}}$

b)



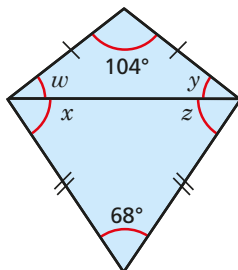
$d = \boxed{\phantom{00}}$

c) What do you notice about opposite angles in a parallelogram?

\_\_\_\_\_

5 Two isosceles triangles are joined to form a kite.

a) Work out the sizes of the unknown angles.



$w =$    $y =$    $x =$    $z =$

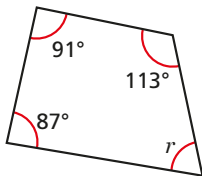
b) Work out  $w + x$ .

c) Work out  $y + z$ .

What do you notice? Talk about it with a partner.

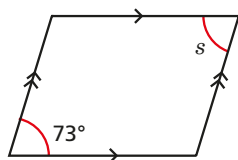
6 Work out the sizes of the unknown angles.

a)



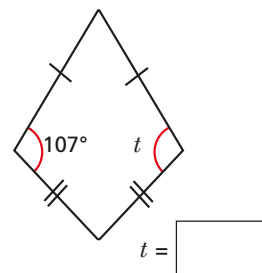
$r =$

b)



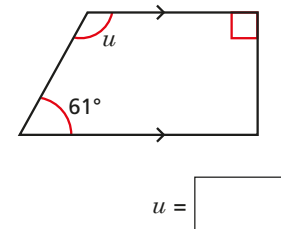
$s =$

c)



$t =$

d)



$u =$

Compare your reasoning with a partner.

7 Teddy is drawing a quadrilateral.

My quadrilateral has exactly three right-angles.



Is Teddy's quadrilateral possible? \_\_\_\_\_

Explain your answer.

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