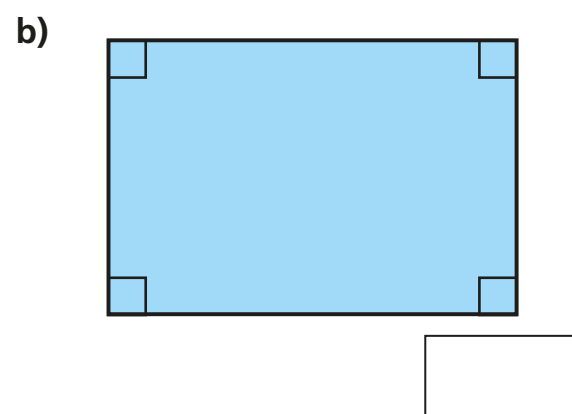
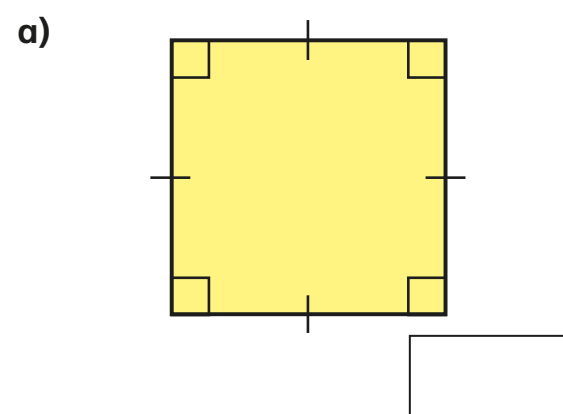


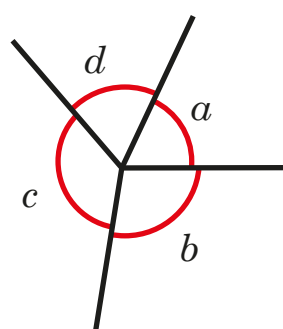
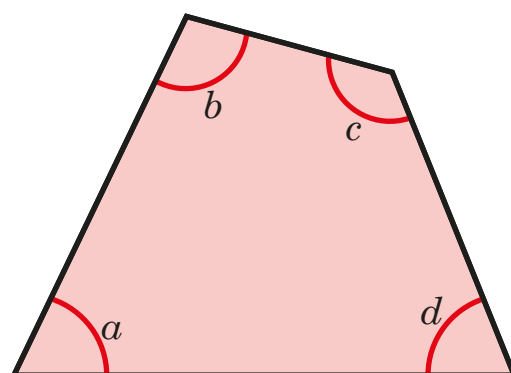
Angles in special quadrilaterals

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



What do you notice?

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

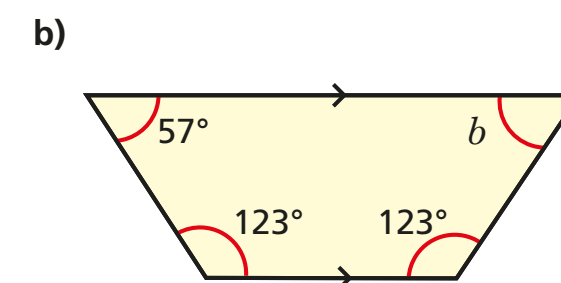
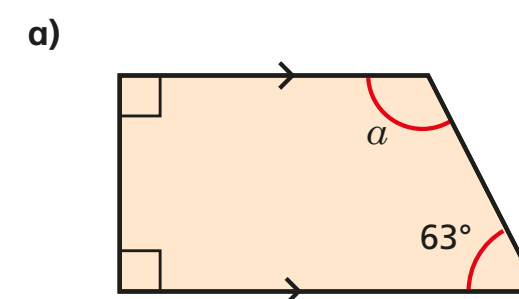


What do the diagrams illustrate about the sum of the angles in a quadrilateral?

Complete the sentence.

Angles in a quadrilateral _____

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

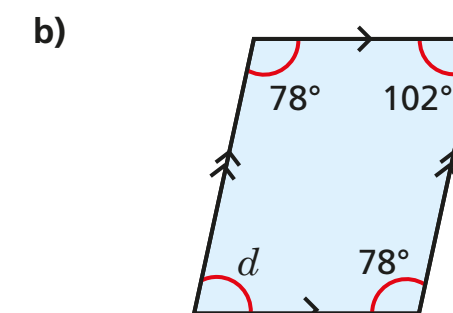
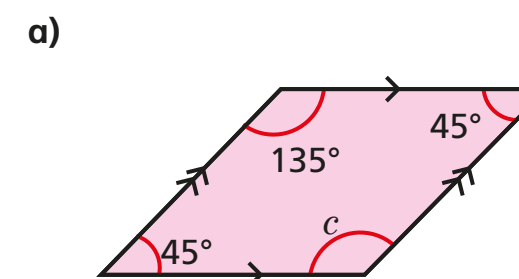


$$a = \boxed{}$$

$$b = \boxed{}$$

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

4 Work out the sizes of the unknown angles.



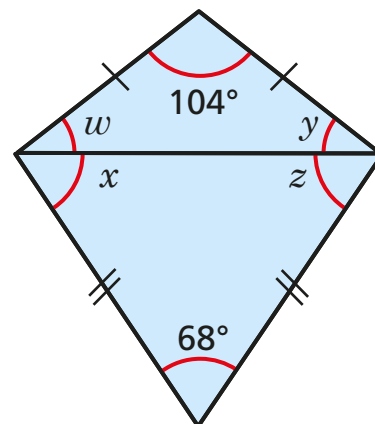
$$c = \boxed{}$$

$$d = \boxed{}$$

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.



$$w = \boxed{} \quad y = \boxed{} \quad x = \boxed{} \quad z = \boxed{}$$

b) Work out $w + x$.

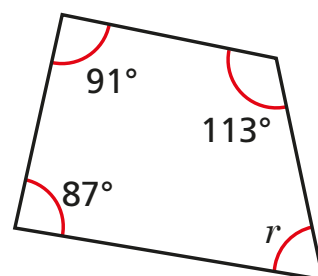
c) Work out $y + z$.

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



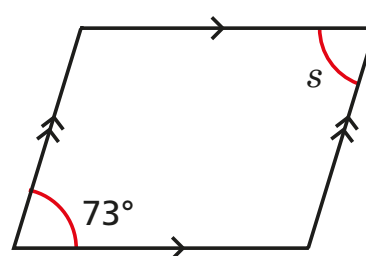
- 6 Work out the sizes of the unknown angles.

a)



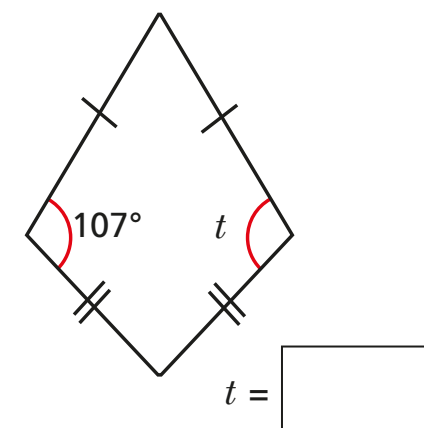
$$r = \boxed{}$$

b)

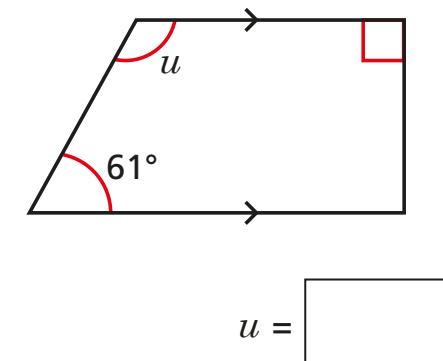


$$s = \boxed{}$$

c)



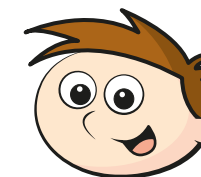
d)



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.
