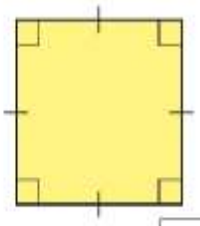
This week we are recapping on 2D and 3D shapes.

LO: To calculate angles in polygons (bronze)

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

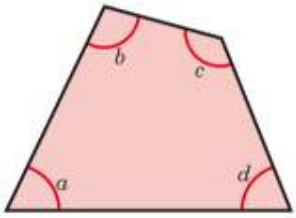
a)

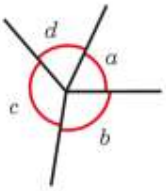


b)

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.

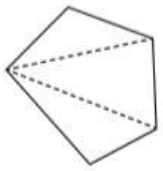
Angles in a quadrilateral _____

3 The sum of the interior angles of a triangle is 180°.

Split the polygons into triangles to work out the sum of their interior angles. Your lines should not overlap.

The first one has been done for you.

a)



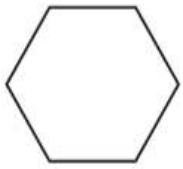
number of sides = 5

number of triangles = 3

3 × 180 = 540

The sum of the interior angles of a pentagon is 540°

b)



number of sides = ____

number of triangles = ____

____ × 180 = ____

The sum of the interior angles of a hexagon is ____

c)

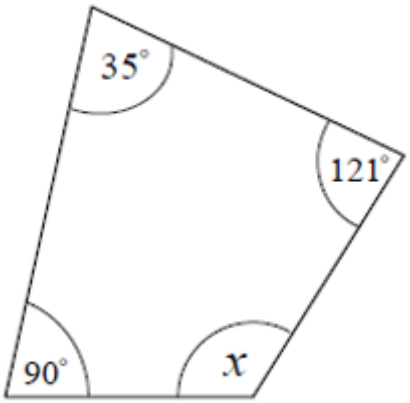
number of sides = ____

number of triangles = ____

____ × 180 = ____

The sum of the interior angles of a heptagon is ____

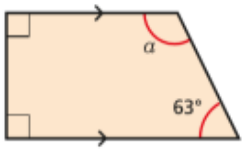
4



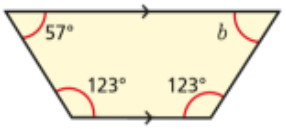
X=

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

a)



b)



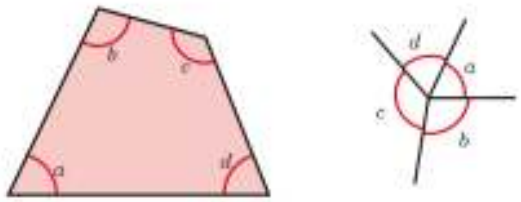
a = ____ b = ____

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

This week we are recapping on 2D and 3D shapes.

LO: To calculate angles in polygons (silver)

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



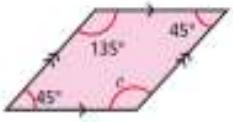
What do the diagrams illustrate about the sum of the angles in a quadrilateral?

Complete the sentence.

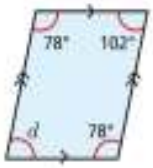
Angles in a quadrilateral _____

2 Work out the sizes of the unknown angles.

a)



b)



$c =$ ☐ $d =$ ☐

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

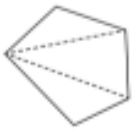
_____

3 The sum of the interior angles of a triangle is 180°.

Split the polygons into triangles to work out the sum of their interior angles. Your lines should not overlap.

The first one has been done for you.

a)



number of sides = 5

number of triangles = 3

3 × 180 = 540

The sum of the interior angles of a pentagon is 540°

b)

number of sides = ☐

number of triangles = ☐

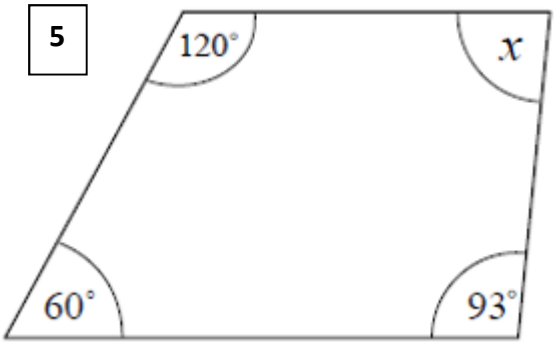
☐ × 180 = ☐

The sum of the interior angles of a hexagon is ☐

4 Complete the table.

Shape	Number of sides	Number of triangles	Sum of interior angles
quadrilateral	4	2	360°
pentagon			
nonagon			
decagon			
	6		
		6	
			1,800°

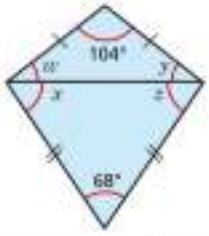
5



X =

6 Two isosceles triangles are joined to form a kite.

a) Work out the sizes of the unknown angles.



$w =$ ☐ $y =$ ☐ $x =$ ☐ $z =$ ☐

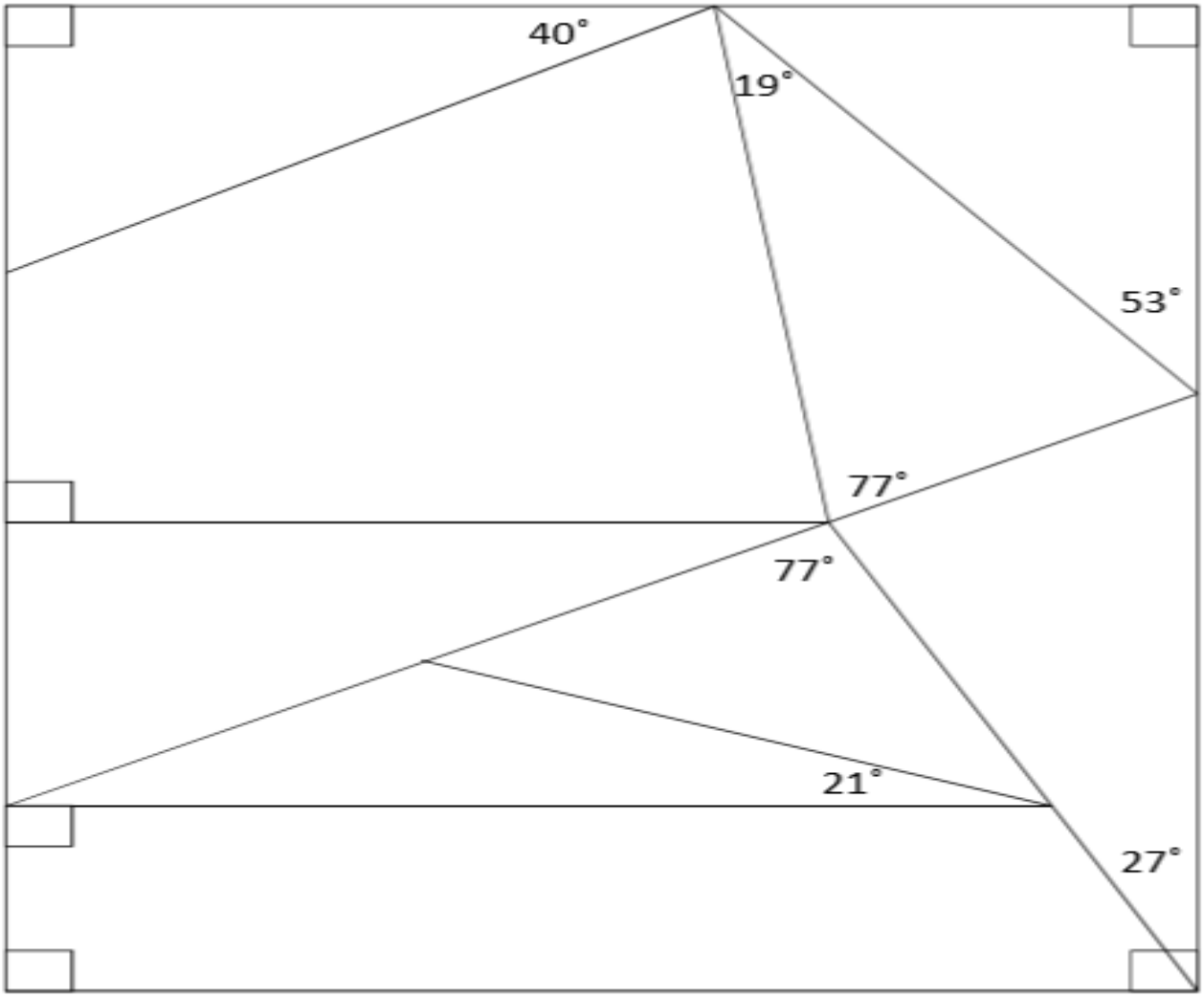
b) Work out $w + x$.

☐

This week we are recapping on 2D and 3D shapes.

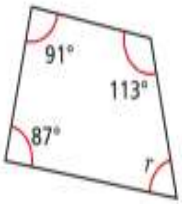
LO: To calculate angles in polygons (gold)

1. Calculate the missing angles on the shape below



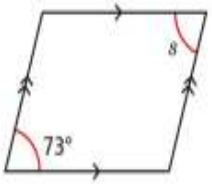
2 Work out the sizes of the unknown angles.

a)



$r =$ ☐

b)

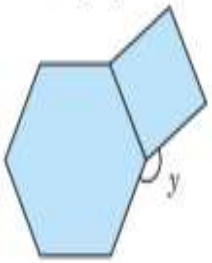


$s =$ ☐

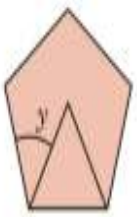
3 Each compound shape is made up of regular polygons.

Work out angle y in each case.

a)



d)



4. Two rhombuses together will make a rectangle. True or false? Why?