Find Missing Exterior Angles of Polygons

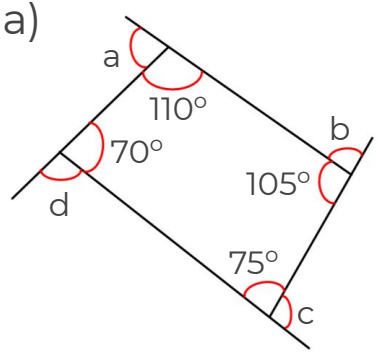
Maths

Miss Davies

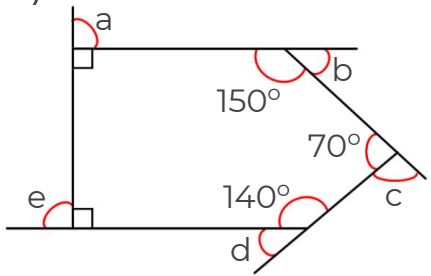
Find Missing Exterior Angles of Polygons

1. Work out the size of each exterior angle of the polygons.

a)



b)

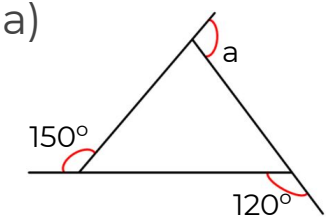


What is the sum of the exterior angles in part a and b

2. What is the sum of the exterior angles of any polygon?

3. Find the missing angles.

a)



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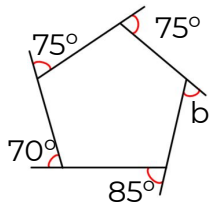
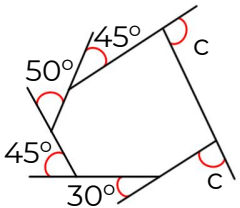
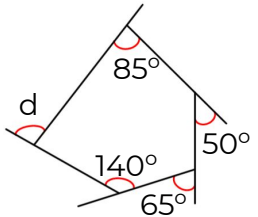


c)



d)



Find Missing Exterior Angles of Polygons

4. Work out the exterior angles of regular polygons with the given number of sides.

Number of sides	Size of the exterior angle
3	
4	
5	
6	
10	
36	

5. A regular polygon has n sides.
Write an expression to represent the size of each exterior angle.

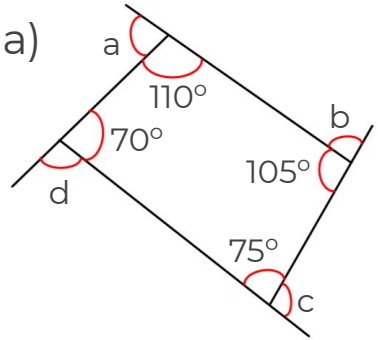
6. A regular polygon has an exterior angle of 45°.
How many sides does the regular polygon have?

Answers

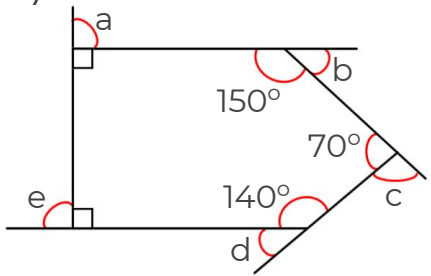
Find Missing Exterior Angles of Polygons

1. Work out the size of each exterior angle of the polygons.

a)



b)



What is the sum of the exterior angles in part a and b

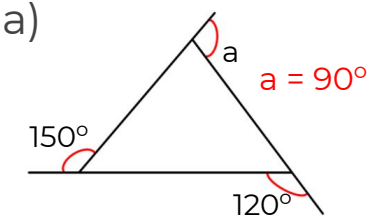
a = 70°, b = 110°,
c = 105°, d = 75°
Sum = 360°

a = 90°, b = 30°, c = 110°,
d = 40°, e = 90°
Sum = 360°

2. What is the sum of the exterior angles of any polygon?

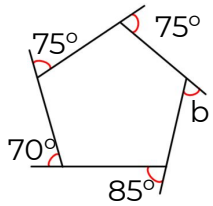
3. Find the missing angles.

a)



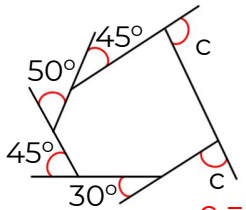
a = 90°

b)



b = 55°

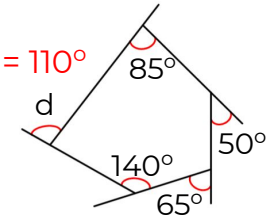
c)



c = 95°

d)

d = 110°



Find Missing Exterior Angles of Polygons

4. Work out the exterior angles of regular polygons with the given number of sides.

Number of sides	Size of the exterior angle
3	120°
4	90°
5	72°
6	60°
10	36°
36	10°

5. A regular polygon has n sides.
Write an expression to represent the size of each exterior angle. $\frac{360}{n}$

6. A regular polygon has an exterior angle of 45°.
How many sides does the regular polygon have? 8 sides