

1. Calculate the size of the *exterior* angles of a regular polygon which has interior angles of:
 - (a) 150°
 - (b) 175°
 - (c) 162°
 - (d) 174°

2. Calculate the sizes of the *exterior* and *interior* angles of:
 - (a) a regular octagon,
 - (b) a regular decagon.

3.
 - (a) Calculate the size of the *interior* angles of a regular 12-sided polygon.
 - (b) What is the sum of the *interior* angles of a regular 12-sided polygon?

4.
 - (a) What is the size of the *interior* angle of a regular 20-sided polygon?
 - (b) What is the sum of the *interior* angles of a regular 20-sided polygon?

5. Calculate the size of the *exterior* angle of a regular pentagon.

6. The size of the exterior angle of a regular polygon is 12° . How many sides does this polygon have?

7. Calculate the number of sides of a regular polygon with interior angles of:
 - (a)

| | | | |
|-------|-------------|------|-------------|
| (i) | 150° | (ii) | 175° |
| (iii) | 162° | (iv) | 174° |
 - (b) Show why it is impossible for a regular polygon to have an interior angle of 123° .

8.
 - (a) Complete the following table for regular polygons. Note that many of the missing values can be found in the examples and earlier exercises for this unit.