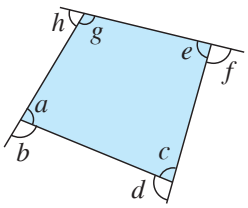
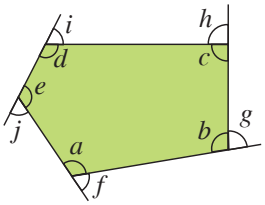
SELF PRACTICE 4.2

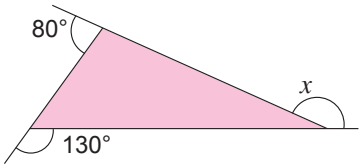
1. State the number of triangles that can be found in the polygon below and calculate the total sum of the interior angles.

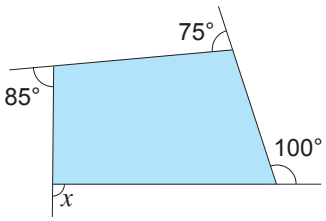
Polygon	Number of triangles in the polygon	Total sum of exterior angles
Pentagon		
Hexagon		
Heptagon		
Octagon		
Nonagon		

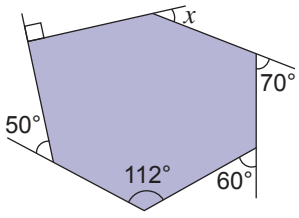
2. Name all the interior angles and exterior angles for each of the following polygons.

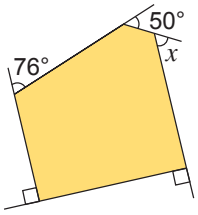
(a) 	(b) 
Interior angles:	Interior angles:
Exterior angles:	Exterior angles:

3. Calculate the value x for each of the following diagrams.

(a) 

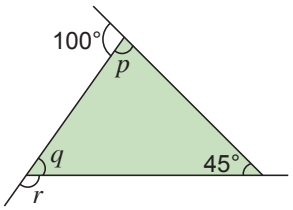
(b) 

(c) 

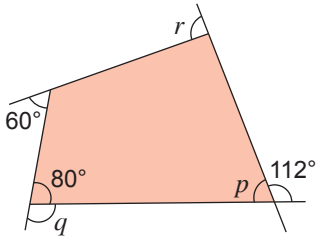
(d) 

4. For each of the diagram below, calculate the value p, q and r.

(a)

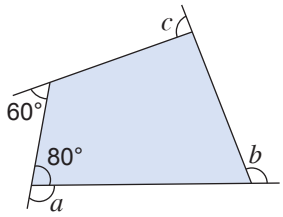


(b)

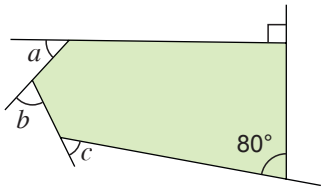


5. Calculate the value $a + b + c$.

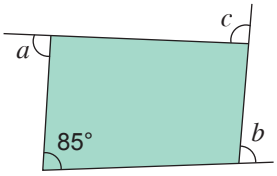
(a)



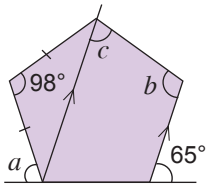
(b)



(c)



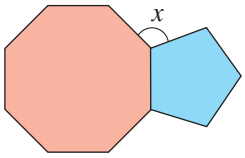
(d)



6. Determine the number of sides for a polygon if the total sum of interior angles is
   (a) 900° (b) 1 080° (c) 1 260°

7. Zaidi has a vegetable garden that is shaped like a regular polygon. The dotted lines is the axis of symmetry of his garden.
   (a) What is the actual shape of Zaidi's garden?
   (b) Calculate the value y.

8. The diagram shows two swimming pools at a sports centre in the shape of a regular octagon and pentagon. What is the value of angle x?



GENERATING EXCELLENCE

1. Construct the following polygons using compasses and a ruler.
   (a) Equilateral triangle ABC with sides 4 cm.
   (b) Square $PQRS$ with sides 3 cm.