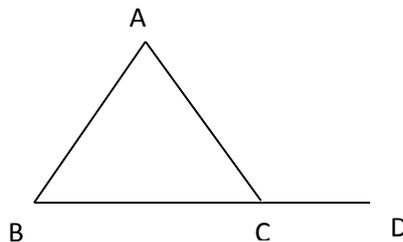
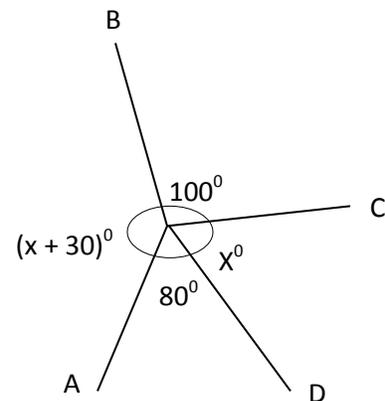


1. What is the suitable name of a polygon with five sides and five angles? Draw its rough figure.
2. Rini marked angles of a polygon as  $100^\circ$ ,  $85^\circ$ ,  $70^\circ$  and  $65^\circ$ . Is it right? Why?
3. What is the difference between sum of the angles of a polygon and sum of the angles of another polygon with number of sides one less than this polygon? If the sum of the angles of a polygon is  $900^\circ$ , What will be the sum of the angles of a polygon with number of sides one more than this polygon.?
4. What is the sum of the angles of the polygon with 62 sides? What is the sum of the angles of a polygon with one more side?
5. When asked to find the sum of angles of a polygon, Haseena got  $800^\circ$ . Is it right? Justify.
6. A six sided polygon has all its angles equal. What is the sum of the angles? How much is each angle?
7. In the figure, what is the relation between  $\angle ACB$  and  $\angle ACD$ ? If  $\angle ACB = 80^\circ$ ,  
 (I). What is  $\angle ACD$   
 (II). What is  $\angle A + \angle B$

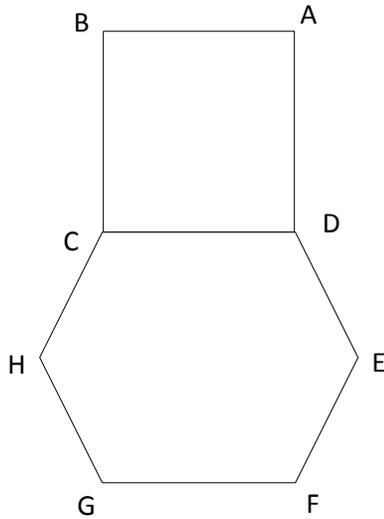


8. In a regular polygon, the internal and external angle at one vertex are in the ratio 4 : 1. How much is internal angle? How much is external angle? How many sides does it have?
9. Can the ratio of internal angle and external angle be 5 : 4? Why?
10. Angles of a quadrilateral are  $(2x + 3y)^\circ$ ,  $(3x + 8y)^\circ$ ,  $(8x + 5y)^\circ$  and  $(5x + 2y)^\circ$ . Find the value of  $X + Y$
11. Angles of a quadrilateral are in the ratio 1 : 2 : 3 : 4. How much is each angle? How much is each external angle?
12. Three angles of a quadrilateral are  $115^\circ$ ,  $80^\circ$  and  $73^\circ$ . How much is fourth angle? How much is each external angle?
13. There are 4 angles around a point. If their measures are  $(x + 20)^\circ$ ,  $(x+30)^\circ$ ,  $(x + 50)^\circ$  and  $(x + 60)^\circ$ , what is  $x$ ?
14. From the figure find the value of  $x$ . How much is  $\angle AOB$ .

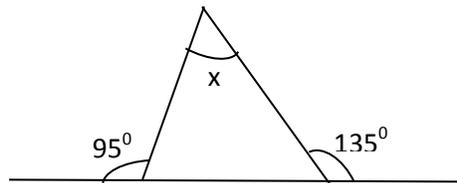


15. Four angles of a pentagon are  $100^\circ$  each. What is fifth angle?
16. Draw a pentagon with all sides and angles are equal. How much is one internal angle and external angle?

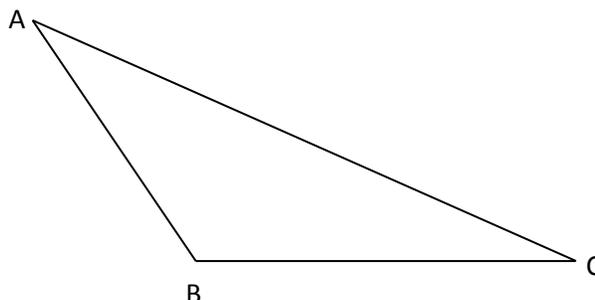
17. In the figure ABCD is a square and CDEFGH is a regular hexagon.  
 (I). What is  $\angle ADC$ ,  $\angle CDE$  and  $\angle ADE$ ?  
 (II). If we draw a regular polygon with AD and DE as sides, how many sides does it have?



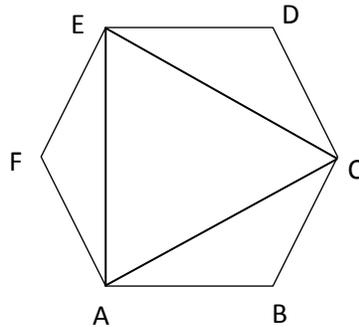
18. One external angle of a regular polygon is  $15^\circ$ . How many sides does it have?  
 19. If a regular polygon has 36 sides how much is one external angle? Also find external angle.  
 20. If the sum of the angles of a polygon is 2700, how many sides does it have?  
 21. In the figure what is the value of  $x$ ?



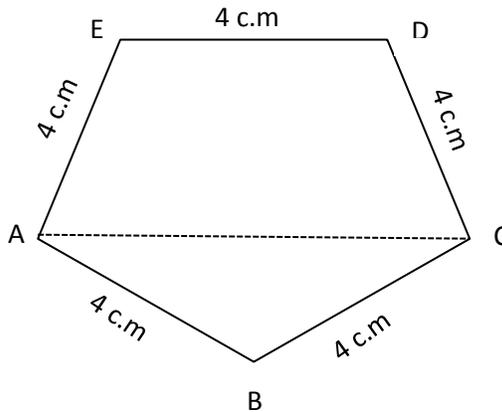
22. Can you draw a regular polygon with each of external angles equal to  $18^\circ$ ? Why?  
 23. Can you draw a regular polygon with each of its angles equal to  $155^\circ$ ? Give reason.  
 24. A, B, and C are three consecutive vertices of a regular polygon. Also  $\angle ACB = 20^\circ$ . How much is one external angle of the regular polygon? How many sides does it have?



25. One side of a regular polygon is 4 cm and one external angle is  $60^\circ$ . How many sides does it have? Construct polygon.
26. Draw 4 polygons with different number of sides. In each polygon draw all diagonals from one vertex. Write number of sides, number of diagonals and number of triangles which you get.
- (I). What is the relation between number of sides and number of diagonals?  
 (II). What is the relation between number of sides and number of triangles?
27. In the figure ABCDEF is a regular hexagon. Find  $\angle ABC$ ,  $\angle BAC$  and  $\angle CAE$ . Give the suitable name for triangle ACE.



28. The sum of angles of a polygon is  $1980^\circ$ . What will be the sum of the angles a polygon with number of sides two more than this polygon and also of another polygon with number of sides two less than this polygon?
29. AC and ED are parallel. Draw a pentagon with angles given in the figure. Are the angles of this polygon equal?



30. Draw a regular polygon with 8 sides and length of one side is equal to 3cm. How much of each angle of this polygon?