TOPIC- TRIANGLES
ASSIGNMENT (BASIC)

# Mark the correct alternative in each of the following questions.

1. A triangle has _____ edges.
   - (i)   1
   - (ii)   2
   - (iii)   3
   - (iv)   4

2. A triangle has_____ angles.
   - (i)   1
   - (ii)   2
   - (iii)   3
   - (iv)   4

3. A triangle has _____ interior angles.
   - (i)   1
   - (ii)   3
   - (iii)   4
   - (iv)   6

4. A triangle has _____exterior angles.
   - (i)   1
   - (ii)   3
   - (iii)   4
   - (iv)   6

5. Sum of the angles of a triangle is _____ right angles.
   - (i)   1
   - (ii)   2
   - (iii)   3
   - (iv)   4

6. Sum of the two sides of a triangle is _____ to the third side.
   - (i)   Smaller
   - (ii)   greater
   - (iii)   equal
   - (iv)   none of the above

7. A triangle has at least_____ right angles.
   - (i)   1
   - (ii)   2
   - (iii)   3
   - (iv)   4

8. A triangle has at most _____ obtuse angles.
   - (i)   1
   - (ii)   2
   - (iii)   3
   - (iv)   4

9.   A triangle has at most _____ acute angles.
    (i)    1
    (ii)   2
    (iii)  3
    (iv)   4

10.  A triangle has at least_____ acute angles.
    (i)    1
    (ii)   2
    (iii)  3
    (iv)   4

**Answer the following questions**

11.  Classify the triangle into acute triangle, obtuse triangle and right triangle with the following angles:

   (i) 90°, 45°, 45°

   (ii) 60°, 60°, 60°

12.  Classify the triangle according to sides, that is, equilateral, isosceles and scalene triangles:

   (i) 6 cm, 3 cm, 5cm.

   (ii)  6 cm, 6 cm, 6 cm.

13.  Is it possible to draw a triangle by taking the measurements 5cm, 7cm, 13cm as sides? Justify your answer.

14.  One of the angles of a right-angled triangle is 47°, calculate the third angle.

15.  The two angles of a triangle are 57° and 68°, Find the third angle,

16.  In $\Delta LMN$, find the opposite vertices of sides MN and LN.

17.  The three sides of a triangle are 13cm, 14cm and 15 cm. calculate the perimeter of the triangle.

18.  Define triangle.

19.  Calculate the sum of two acute angles of a right-angled triangle.

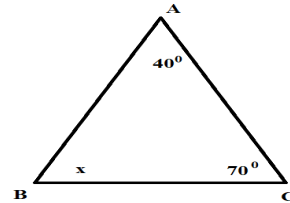20.  Calculate the number of triangles in the given figure.
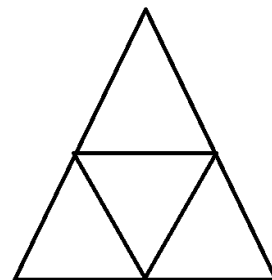
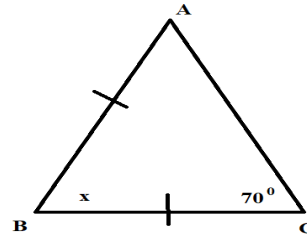21. Calculate the number of triangles in the given figure.
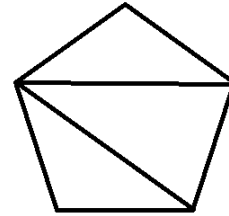
22. In the figure Calculate x
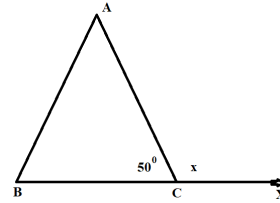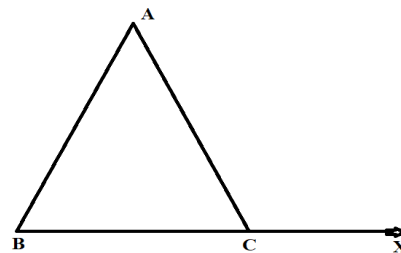
23. In the figure Calculate x

24. In the given figure calculate x

25. Locate the points P, Q, R and S  on a paper. Join them in pairs. Then answer the following questions.
    (i)     How many triangles formed?
    (ii)    How many triangles formed by taking P as common vertex?

26. **By observing the figure answer the following questions.**

    (i)     **Exterior angle produced at C Is_____**

    (ii)    **Interior angles of $\triangle ABC$ are _____**

    (iii)   **Interior adjacent angle corresponding to $\angle ACX$ is _____**

    (iv)    **Interior opposite angle corresponding to $\angle ACX$ is _____**

27. **By observing the figure answer the following questions.**
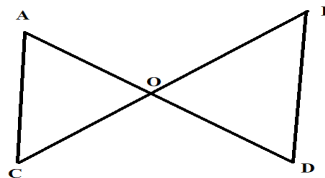


    (i)     The sides of $\triangle AOC$ are _____

    (ii)    The angles of $\triangle BOD$ are _____

    (iii)   The vertices of $\triangle AOC$ are _____

    (iv)   The edges of $\triangle AOC$ are _____

28. **By observing the figure answer the following questions.**
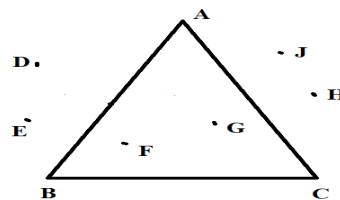


    (i)     The exterior points of $\triangle ABC$ are _____

    (ii)    The interior points of $\triangle ABC$ are _____

    (iii)   The points on the triangular region of $\triangle ABC$ are _____

29. In the given figure name the triangles which have
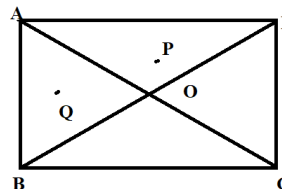


    (i)     A as one vertex

    (ii)    P in its exterior

    (iii)   Q in its exterior

    (iv)   O as one vertex

30. Draw any $\triangle ABC$ and mark the points

    (i)     X, Y and Z in the interior of $\triangle ABC$

    (ii)    P, Q, R and T in the exterior of $\triangle ABC$

    (iii)   L, M, and N on the $\triangle ABC$