BK BIRLA CENTRE FOR EDUCATION
SARALA BIRLA GROUP OF SCHOOLS
SENIOR SECONDARYCO-ED DAY CUM BOYS' RESIDENTIAL SCHOOL
Post-Mid Term- 2024-25
MATHEMATICS (041) QUESTION PAPER

INDIAN PUBLIC SCHOOLS' CONFERENCE

Class   : VII   Duration: 1 Hrs.
Date   :06.01.2025   Max. Marks: 25
Admission No.:   Roll No.:

General Instructions:
Questions 1 to 5 are 1 mark each.
Questions 6 to 9 are of 2 marks each.
Questions 10 and 13 are of 3 marks each.

SECTION-A $(5 \times 1 = 5)$

Choose the correct answer.

1) How many altitudes can a triangle have?

   a) 1   b) 2   c) 3   d) None of these

2) Which is the longest side in the triangle ABC right angled at B?

   a) AB   b) AC   c) BC   d) None of these

3) The sum of the lengths of any two sides of a triangle is _____ the third side of the triangle.

   a) Greater than   b) less than   c) double   d) half

4) A triangle in which two sides are of equal lengths is called _____.

   a) scalene   b) acute-angled   c) equilateral   d) isosceles

5) In the Pythagoras property, the triangle must be _____.

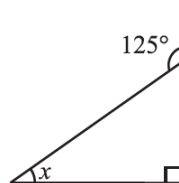   a) obtuse-angled b) acute-angled   c) right-angled   d) None of these

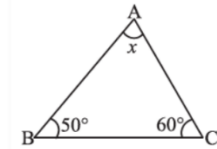## SECTION- B $(4 \times 2 = 8)$

6) Find the value of the unknown exterior angle x in the following diagrams:
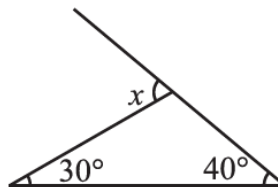
7) Find the value of the unknown interior angle x in the following figures:

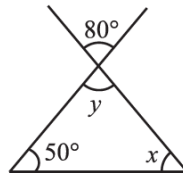8) Find the value of the unknown x in the following diagrams:

9) Is it possible to have a triangle with the sides 6 cm, 3 cm, 2 cm

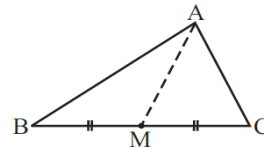**SECTION- C** $(4 \times 3 = 12)$

10) Find the values of the unknowns x and y in the following diagrams:

11)   AM is a median of a triangle ABC.
      Is AB + BC + CA > 2 AM?
      (Consider the sides of triangles ABM and AMC?)

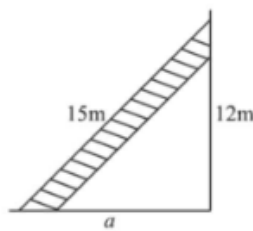12) Draw rough sketches for the following:
     (a) In Δ ABC, BE is a median.
     (b) In Δ PQR, PQ and PR are altitudes of the triangle.
     (c) In Δ XYZ, YL is an altitude in the exterior of the triangle.

13) PQR is a triangle, right-angled at P. If PQ = 10cm and PR = 24 cm, find QR.

OR

A 15 m long ladder reached a window 12 m high from the ground on placing it against a wall at a distance a. Find the distance of the foot of the ladder from the wall.

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