INTERNATIONAL INDIAN SCHOOL BURAIDAH

Worksheet for the Academic Year 2026-27

CLASS: VII SUBJECT: MATHEMATICS DATE: 18-10-2026

LESSON 7: A Tale of Three Intersecting Lines

1. The sum of the angles of any triangle is----------
2. A triangle having each side equal to 5.2 cm has been constructed. The triangle is a/an---------
3. The sum of any two sides of a triangle is always---------- the third side
4. One of the acute angles of a right triangle is 40°, the other acute angle is--------
5. If all the 3 angles are equal, the measure of each angle of a triangle LMN is --------
6. The perpendicular line segment from a vertex to the opposite side of a triangle is called---------
7. Altitude is also called-------- of a triangle
8. An isosceles triangle,----- sides are equal
9. A triangle having all its sides of different lengths is called---------- triangle
10. Write the six elements (angles & sides) of a Δ PQR
11. Write the
    a) side opposite to the vertex X of Δ XYZ
    b) angle opposite to the side AC of Δ ABC
12. Verify if the following can be the lengths of the sides of a triangle.

    a) 6 cm, 8 cm, 10 cm

    b) 20cm,25cm,30cm

    c) 5cm,4cm,9cm

    d) 10cm,12cm,27cm

13. For each of the following angles, find the other angle (second angle) for which a triangle is possible

    a) 65° b) 105° c) 90°

14. For each of the following angles, find the other angle (second angle) for which a triangle is not possible

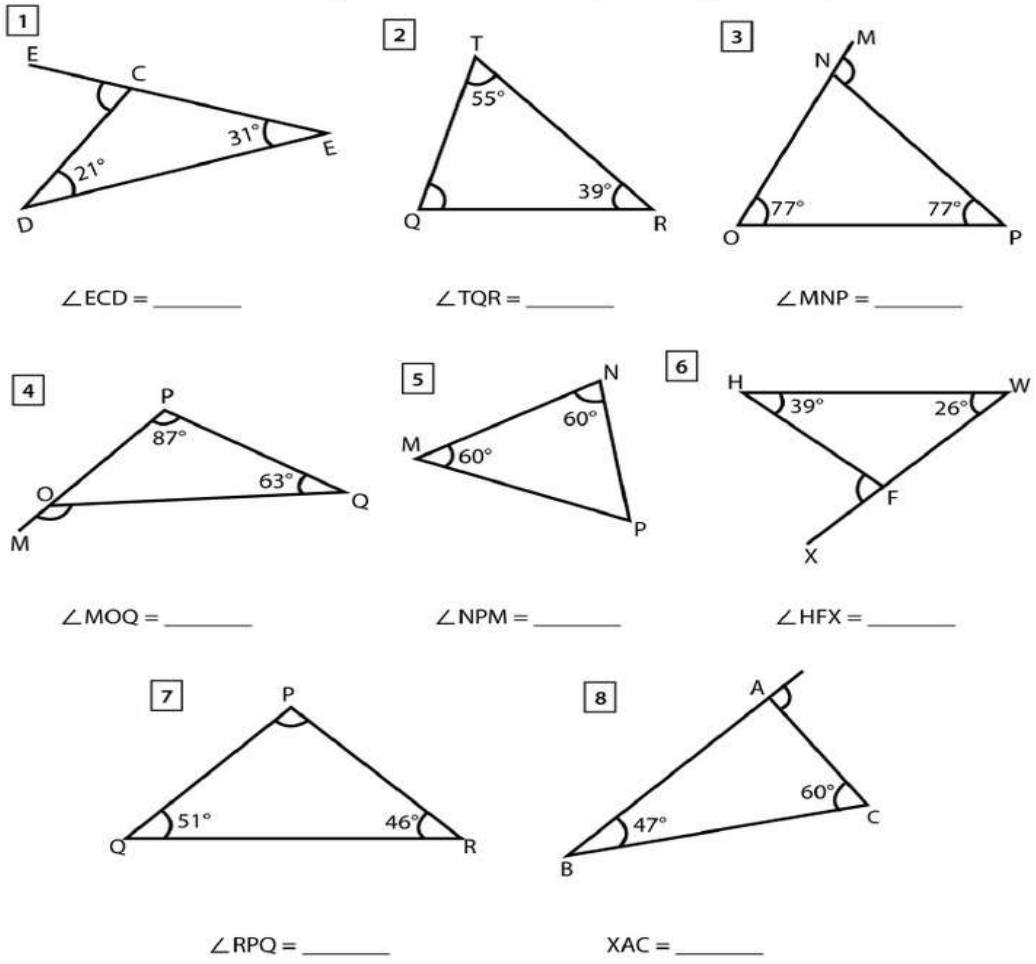
a) 135° b) 100° c) 50°

15. If two of the angles of a triangle measure 75°, what would the measure of the third angle be? (Use angle sum property)

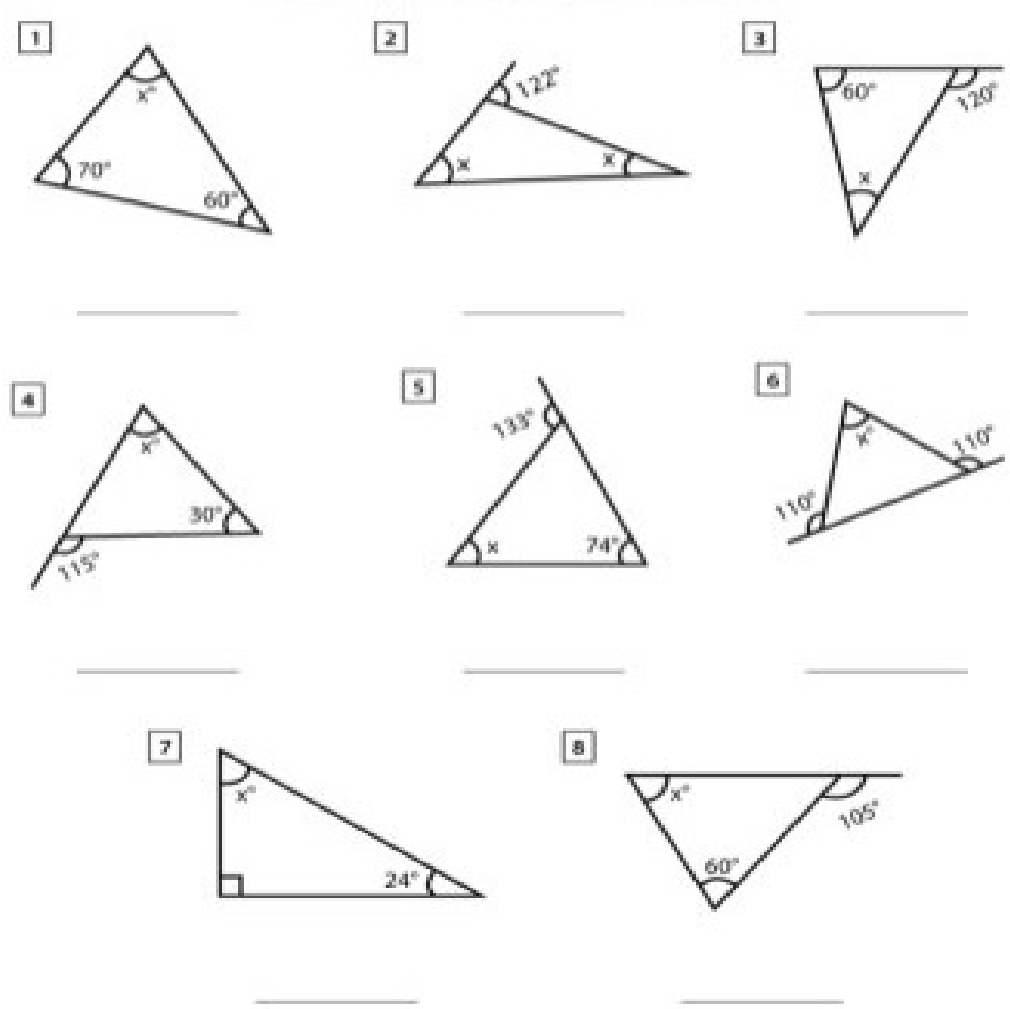
16. Find the third angle of a triangle (using a parallel line) when two of the angles are:
    (a) 56°, 62°
    (b) 102°, 48°

17. Find the third angle of a triangle (using angle sum property) when two of the angles are:
    a) 45°, 100°
    b) 25°, 86°
    c) 130°, 35°

18. Find the unknowns in the following figures:



19. Find the unknowns in the following figures:



20. Construct a triangle ABC, where AB = 6cm, BC = 5cm, and angle B=60°
21. Draw an isosceles triangle ABC with two sides of the triangle equal to 6 units and one side equal to 5 units.
22. Construct a triangle XYZ with XZ = 8cm. ∠X = 45° and ∠Y = 65°
23. Construct a triangle KLM, KL = 10cm. LM = 6cm and angle L = 75°
24. Construct a triangle ABC whose side lengths are 3cm, 5cm, and 6cm.
25. Construct a triangle STU in which ∠T = 60°, ∠U = 70° and TU = 7.5 cm. Draw an altitude from ∠S to TU
26. Construct a right triangle ABC in which ∠B = 45°, AB = 7cm CB = 5 cm. Construct an altitude from ∠C to AB
27. Draw a triangle when PQ = QR = PR = 8 cm. Also Construct an altitude from ∠P to QR

Answers:

1. 180° 2. Equilateral triangle 3. Greater than 4. 50°

5. 60° 6. Altitude 7. Height 8. 2 sides

9. scalene triangle 10. 3 sides & 3 angles (PQ, QR, PR, ∠P, ∠Q, ∠R)

11. a) YZ b) ∠B 12. a) Yes b) Yes c) No d) No

13. a) 20° b) 30° c) 50°

14. a) 70° b) 90° c) 150°

15. 30°

16. a) 62° b) 30°

17. a) 35° b) 69° c) 15°

18. 1) 52° 2) 86° 3) 154° 4) 150° 5) 60°
6) 65° 7) 83° 8) 107°

19. 1) 50° 2) 61° 3) 60° 4) 85° 5) 59° 6) 40°
7) 66° 8) 45°

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