

DAV PUBLIC SCHOOL, IFFCO, PARADEEP

CLASS-IX

SUB-MATHEMATICS

TOPIC-TRIANGLES

WORKSHEET-STANDARD

TIME-45 Min

MAX.MARKS:20

Choose the most appropriate option:

(2 × 1=2)

1. In ΔABC , $AB = AC$ and $\angle B = 50^\circ$. Then $\angle A$ is equal to
(A) 40° (B) 50° (C) 80° (D) 130°
2. Two sides of a triangle are of lengths 12 cm and 13 cm. The length of the third side of the triangle cannot be
(A) 0.8 cm (B) 5 cm (C) 4 cm (D) 6 cm

Fill in the blanks:

(2 × 1=2)

3. In ΔPQR measure of $\angle Q = 50^\circ$, $\angle R = 30^\circ$, Then the longest side of the triangle is ____.
4. If $AB = QR$, $BC = PR$ and $CA = PQ$, then $\Delta ABC \cong$ _____.

Answer the following question:

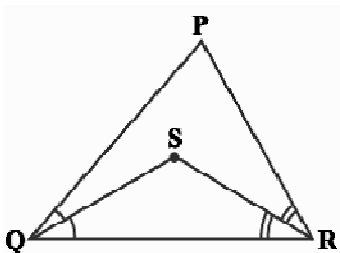
(2 × 1 =2)

5. In the two triangles ABC and DEF , $AB = DE$ and $AC = EF$. Name two angles from the two triangles that must be equal so that the two triangles are congruent. Give reason for your answer.
6. "If two angles and a side of one triangle are equal to two angles and a side of another triangle, then the two triangles must be congruent." Is the statement true? Why?

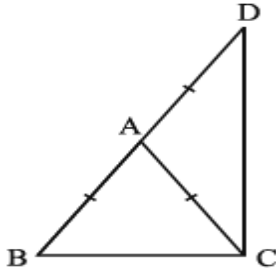
Short Answer Type Question –I

(2 × 2=4)

7. In the figure, $PQ > PR$ and QS and RS are the bisectors of $\angle Q$ and $\angle R$, respectively. Show that $SQ > SR$.



8. $\triangle ABC$ is an isosceles triangle in which $AB = AC$. Side BA is produced to D such that $AD = AB$. Show that $\angle BCD$ is a right angle.



Short Answer Type Question –II

(2 × 3=6)

9. Show that in a quadrilateral $ABCD$, $AB+BC+CD+DA > AC+BD$.

10. Prove that each angle of an equilateral triangle is 60° .

Long answer type question:

(1 × 4= 4)

11. If the bisector of an angle of a triangle also bisects the opposite side, then prove that the triangle is isosceles.