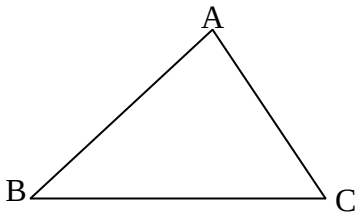
CLASS IX

MATHEMATICS WORKSHEET

CH-7 "TRIANGLES"

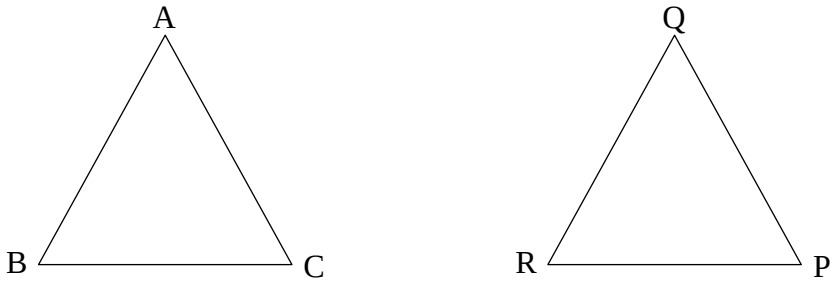
VERY SHORT ANSWER TYPE QUESTIONS

Q.1 In ΔABC, if $\angle C > \angle B$, then which two sides of the triangle can you relate?



Q.2 It is given that $\Delta ABC \cong \Delta DEF$. Is it true to say that AB = EF? Justify your answer.

Q.3 In triangles ABC and PQR, $\angle A = \angle Q \; and \; \angle B = \angle R$, Which side of ΔPQR should be equal to side AB of ΔABC so that the two triangles are congruent? Give reason for your answer.

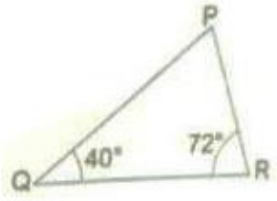


Q.4 In ΔPQR, $\angle P = 70^0$ and $\angle Q = 30^0$. Which side of this triangle is the longest?

SHORT ANSWER TYPE QUESTIONS

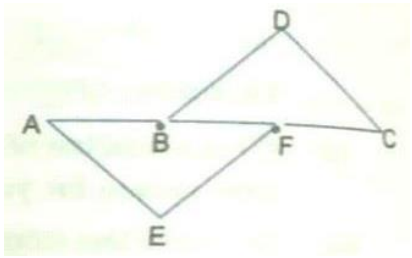
Q.5 If the corresponding angles of two triangles are equal, then they are always congruent. State true or false and justify your answer.

Q.6 In Figure ΔPQR, if $\angle Q = 40^0$ and $\angle R = 72^0$, then find the shortest and the largest sides of the triangle.



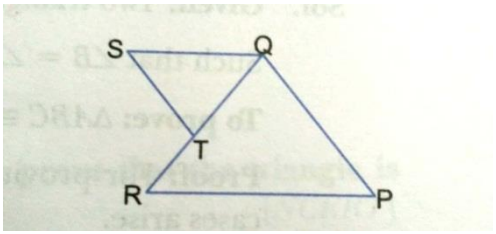
Q.7 Is it possible to construct a triangle with lengths of its sides 5cm, 3cm and 8cm? Give reason for your answer.

Q.8 In Figure, it is given that AB = CF, EF = BD and $\angle AFE = \angle CBD$. Prove that $\Delta AFE \cong \Delta CBD$.



Q.9 S is any point on side QR of a ΔPQR. Show that: $PQ + QR + RP > 2PS$.

Q.10 In the given figure, T is a point on side QR of ΔPQR and S is a point such that RT = ST. Prove that $PQ + PR > QS$.



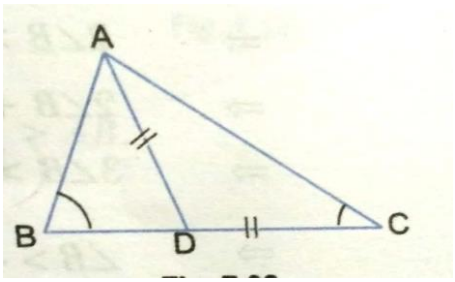
LONG ANSWER TYPE QUESTIONS

Q.11 ABC and DBC are two triangles on the same base BC such that A and D lie on the opposite sides of BC, AB = AC and DB = DC. Show that AD is the perpendicular bisector of BC.

Q.12 ΔABC is a right triangle such that AB = AC and bisector of angle C intersects the side AB at D. Prove that AC + AD = BC.

Q.13 Prove that sum of any two sides of a triangle is greater than twice the median with respect to the third side.

Q.14 ABC is a triangle with$\angle B = 2\angle C$. D is a point on BC such that AD bisects $\angle BAC$ and $AD = CD$. Prove that $\angle BAC = 72^0$.



Q.15 Prove that in a triangle, other than an equilateral triangle, angle opposite the longest side is greater than $\frac{2}{3}$ of a right angle.

ANSWERS

1. $AB > AC$
2. No

4. PQ

5. False

6. Shortest PR, largest PQ

7. NO.