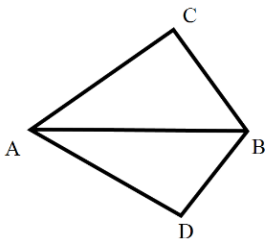
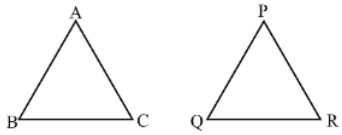
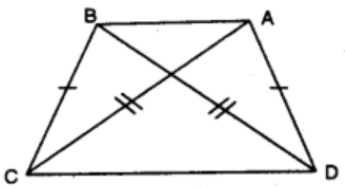
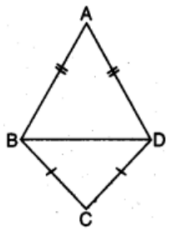
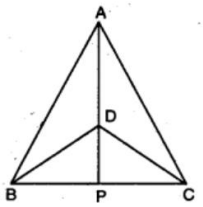
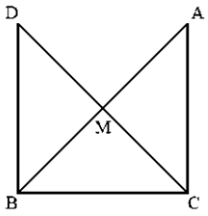
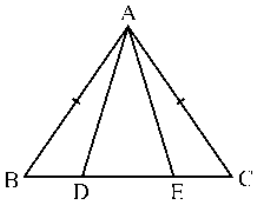
INDIAN SCHOOL NIZWA - WORKSHEET

MATHEMATICS

7. Triangles

Name: _____ Date:_____ Class: IX Sec: ___

1.	If in $\Delta ABC, \angle A = \angle B + \angle C$, then the triangle is a) Isosceles triangle b) equilateral triangle c) right angled triangle
2.	In the above quadrilateral ACBD, we have AC=AD and AB bisects the $\angle A$. Which of the following is true? a) $\Delta ABC \cong \Delta ABD$ b) $\angle C = \angle D$ c) BC=BD d) All are true 
3.	In $\Delta ABC, AB = AC \text{ and } \angle B = 50^0$. Then $\angle C$ is equal to _____ a) 40^0 b) 50^0 c) 80^0 d) 130^0
4.	If AB=QR, BC=PR and CA=PQ, then a) $\Delta ABC \cong \Delta PQR$ b) $\Delta CBA \cong \Delta PRQ$ C) $\Delta BAC \cong \Delta RPQ$ d) $\Delta PQR \cong \Delta BCA$
5.	Which of the following is not a criterion for congruence of triangles? A) SAS b) ASA c) SSA d) SSS
6.	**Assertion:** In $\triangle ABC$ and $\triangle PQR$, AB = PQ, AC = PR and $\angle BAC = \angle QPR$ then $\triangle ABC \cong \triangle PQR$.  **Reason:** Both the triangles are congruent by SSS congruence.
5.	**Assertion (A):** $\Delta ABC \text{ and } \Delta DBC$ are two isosceles triangles on the same base BC and vertices A and D are on the same side of BC. If AD is extended to intersect BC at E, then $\Delta ABC \cong \Delta DBC$. **Reason (R):** If in two right triangles , hypotenuse and one side of a triangle are equal to the hypotenuse and one side of other triangle, then the two triangles are congruent.
6.	In the given figure, AD=BC and BD=AC, prove that $\angle DAB = \angle CBA$. 

7.	In the given figure, $\Delta ABD \ and \ \Delta BCD$ are isosceles triangles on the same base BD. Prove that $\angle ABC = \angle ADC$. 
8.	In the given figure, $\Delta ABC \ and \ \Delta DBC$ are two isosceles triangles on the same base BC and vertices A and D are on the same side of BD, AD is extended to intersect BC at P. Show that i) $\Delta ABD \cong \Delta ACD$ ii) $\Delta ABP \cong \Delta ACP$ 
9..	In right triangle ABC, right-angled at C, M is the mid-point of hypotenuse AB. C is joined to M and produced to a point D such that DM=CM. Point D is joined to point B. Show that i) $\Delta AMC \cong \Delta BMD$ ii) $\angle DBC = 90^0$ iii) $\Delta DBC \cong \Delta ACB$ iv) CM= ½ AB 
10.	In an isosceles triangle ABC with AB = AC, D and E are points on BC such that BE = CD . Show that AD = AE. 
11.	ΔABC is an isosceles triangle in which AB = AC. Side BA is produced to D such that AD = AB. Show that ∠ BCD is a right angle. 