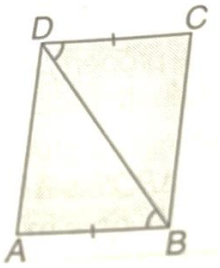
INTERNATIONAL INDIAN SCHOOL BURAIDAH

Worksheet For The Academic Year 2025-26

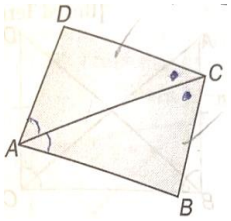
CLASS: IX SUBJECT: Mathematics DATE: 29/06/2025

LESSON-7 Triangles

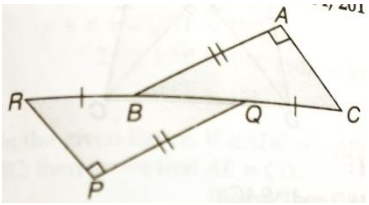
1) Write the 5 rules of congruence of triangles used.
2) In SAS rule the angle between the sides is called the _____ angle.
3) In ΔABC and ΔDEF , if AB = DE and $\angle A = \angle D$, what will be the third condition for the two triangles to be congruent based on SAS rule?
4) In the figure, if AB $\parallel$ CD and AB = CD , show that AD = BC.



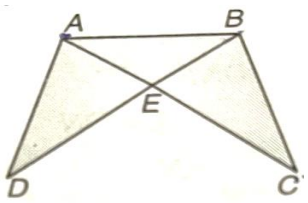
5) If $\Delta PQR \cong \Delta abc$ such that PQ = 5cm , $\angle Q = 40^\circ$ and $\angle P = 80^\circ$, find $\angle C$.
6) If two triangles are such that XY = DF , YZ = FE and XZ = DE , express the congruence using notation and mention the rule used.
7) In the figure, the diagonal AC of quadrilateral ABCD bisects $\angle BAD$ and $\angle BCD$. Prove that BC = CD.



8) In the figure , BA $\perp$ CA , RP $\perp$ QP , AB = PQ and BR = CQ. Prove that AC = PR.

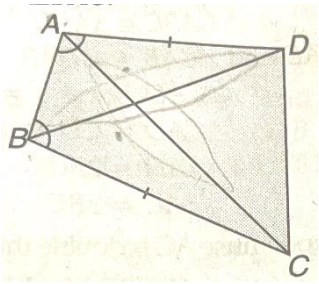


9) In the figure , if ∟BAC = ∟ABD and ∟ACB = ∟BDA , Show that AD = BC.



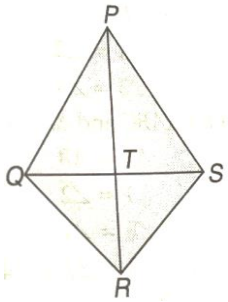
10) In the figure , ABCD is a quadrilateral in which AD = BC and ∟DAB = ∟CBA. Prove that (i) ΔABD ≅ ΔBAC

(ii) BD = AC (iii) ∟ABD = ∟BAC.

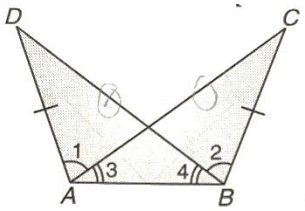


11) In the figure , PQ = PS , RQ = RS then show that

(i) ΔPQR ≅ ΔPSR (ii) ΔRQT ≅ ΔRST



12) In the figure , ΔABD and ΔABC are such that AD = BC , ∟1 = ∟2 , ∟3 = ∟4. Prove that BD = AC.



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

14) ABC is a right angled triangle in which ∟A = 90° and AB = AC. Find ∟B and ∟C.

15) In the given figure , AB = AC and BE & CF are bisectors of ∟B and ∟C Respectively. Prove that ΔEBC ≅ ΔFCB.