INDIAN SCHOOL DARSAIT
DEPARTMENT OF MATHEMATICS

Subject : Mathematics	Topic : Triangles	Date of Worksheet : 29-8-2019
Worksheet No:7		
Resource Person: Sunitha Rajeev		Date : _____
Name of the Student :_____	Class &Division : IX ...	Roll Number : __

Section A (Basic Skill) **Marks**

Evaluate

1. $(7.07 + 1.203)$

2. $225.007 + 20.01 - 14.007$

3. $40 + 12.45 + 10.007$

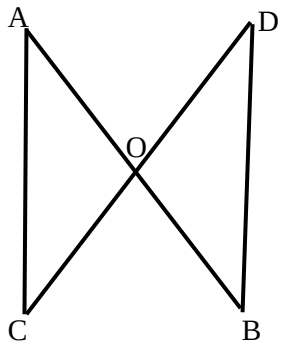
4. 13.7×42.2

5. $(35.5 + 12) \times (12.5 + 0.005)$

Section B

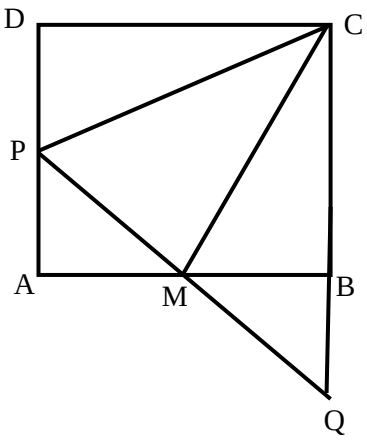
1. Prove that the sum of the four angles of a quadrilateral ABCD is 360^0, using properties of triangles. 2

2. In the given figure , O is the midpoint of AB and CD, prove that AC = BD. 2

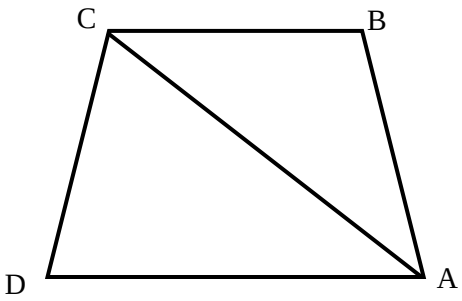


3. In Δ PQR , if S is any point on the side QR, Show that,
PQ + QR + RP > 2 PS. 3

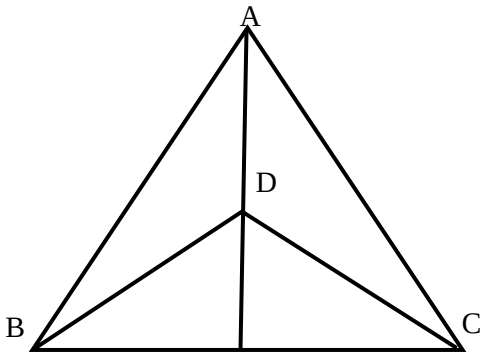
4. In the given figure , ABCD is a square and M is the midpoint of AB. PQ is perpendicular to CM meets AD at P and CB produced at Q. Prove that PA = BQ. 3



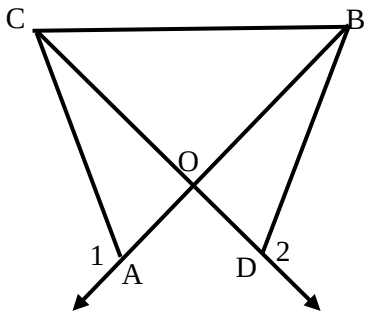
5. In the figure, prove that CD + DA + AB + BC > 2 AC. 3



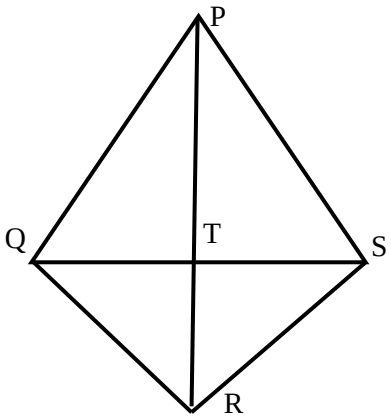
6. In the given figure, AB = AC, D is the point in the interior of Δ ABC such that ∠DBC = ∠DCB. Prove that AD bisects ∠BAC of Δ ABC. 3



7. In the given figure, OA = OD and $\angle 1 = \angle 2$. Prove that Δ OCB is an isosceles triangle. 4

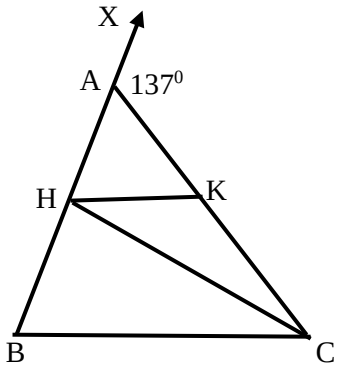


8. In the figure, if PQ = PS, RQ = RS, then show that Δ PQR ≅ Δ PSR and Δ RQT ≅ Δ RST. 4



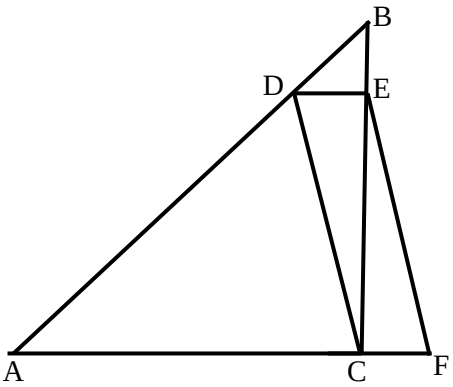
9. PQR is a triangle in which PQ = PR. S is any point on the side PQ. Through S, a line is drawn parallel to QR intersecting PR at T. Prove that PS = PT. 4

10. In the given figure, AB = AC, CH = CB and HK // BC. If $\angle CAX = 137^0$, then find $\angle CHK$. 4



Section C

1. In figure, $\angle ACB$ is a right angle and AC = CD and CDEF is a parallelogram. If $\angle FEC = 10^0$, then calculate $\angle BDE$. 3



2. In figure, PQ = PR. Show that PS > PQ. 3