CONGRUENT TRIANGLES

VERY SHORT ANSWER TYPE QUESTIONS
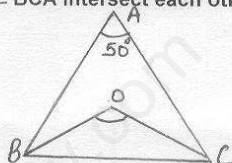
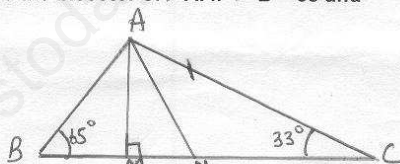Q.1 In the given ΔABC, AD is the median, BL⊥AD and CM⊥DM.
Prove that BL = CM.
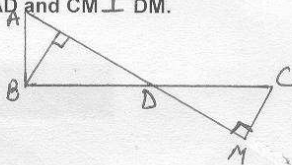
Q.2 In the given figure, AB divides ∠DAC in the ratio 1:3 and AB = DB. Determine the value of x.

Q.3 In the given figure, bisectors of ∠ABC and ∠BCA intersect each other at O. If ∠BAC = 50°, Find∠BOC.

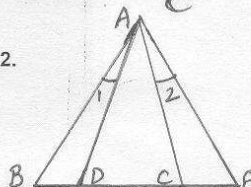Q.4 In the given figure, AM⊥BC and AN is the bisector of ∠A. If ∠B = 65° and ∠C = 33°, find ∠MAN.

Q.5 ABC is an isosceles triangle with AB = AC. AD bisects exterior angle PAC and CD∥BA.
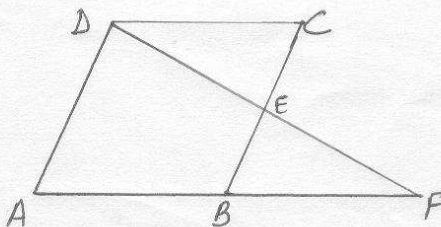Prove that (i) ∠DAC = ∠BCA (ii) ABCD is a parallelogram
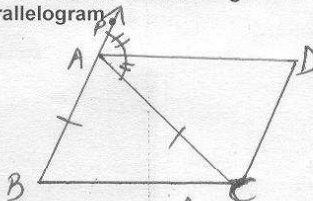
SHORT ANSWER TYPE QUESTIONS

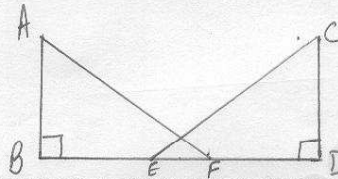Q.6 In the given figure,∠B = ∠E, BD = CE and ∠1 = ∠2.
Show that Δ ABC = Δ AED.

Q.7 ABCD is a parallelogram and E is the midpoint of side BC. DE and AB on producing meet at F. Prove that AF = 2AB.

Q.8 In the given figure, AD and CE are the angle bisectors of $\angle$A and $\angle$C, respectively. If $\angle$ABC = 90°, then find $\angle$AOC.
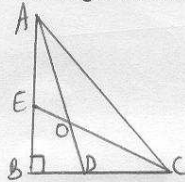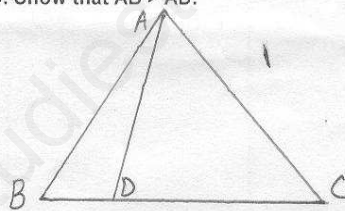

Q.9 In the given figure, AB & CD are perpendicular on BD. Also AB = CD & AF = CE, prove that BE = FD.

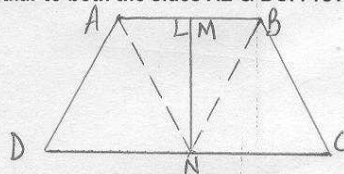Q.10 In the given figure, D is any point on the base BC produced of an isosceles Δ ABC. Prove that AD > AB.
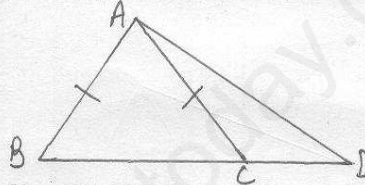
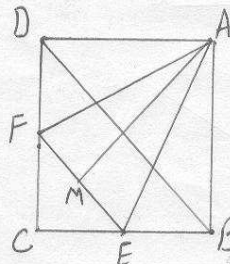

Q.11 In the given figure, AB > AC. Show that AB > AD.

LONG ANSWER TYPE QUESTIONS

Q.12 Line segment joining the mid points M & N of parallel sides AB and CD, respectively of a trapezium ABCD is perpendicular to both the sides AB & DC. Prove that AD = BC.

Q.13 In the given figure, ABCD is a square and EF is parallel to diagonal BD and EM = FM. Prove that
    (i) DF = BE
    (ii) AM bisects $\angle$ BAD
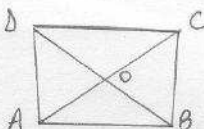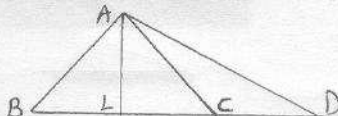
TRIANGLES CONTINUED……………….

Q.14 In the given figure, show that

2(AC + BD) > (AB + BC + CD + DA)

Q.15 In the given figure, the side BC of ∆ABC is produced to D. The bisector of ∠A meets BC in L. Prove that ∠ABC + ∠ACD = 2∠ALC

Q.16 In a right angled triangle, one acute angle is double the other. Prove that the hypotenuse is double the smallest side.
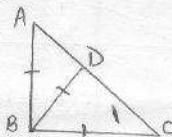
MULTIPLE CHOICE QUESTIONS

Q.17 Two sides of a triangle are of lengths 5 cm and 1.5 cm, the length of the third side of the triangle cannot be

(a) 3.6 cm   (b) 4.1 cm   (c) 3.8 cm   (d) 3.4 cm

Q.18 In the given figure, the measure of ∠ABC is

(a) 60^0 (b) 30^0 (c) 45^0 (d) 90^0
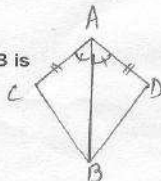
Q.19 In triangles ABC and DEF, AB = FD & ∠A = ∠D. The two triangles will be congruent by SAS axiom if

(a) BC = EF   (b) AC = DE   (c) AC = EF   (d) BC = DE

Q.20 In the given figure, the congruency rule used in proving ∆ ACB ≅ ∆ ADB is

(a) ASA   (b) SAS   (c) AAS   (d) RHS

Q.21 D is a point on the BC of a ∆ABC such that AD bisects∠ BAC. Then

(a) BD = CD   (b) BA > BD   (c) BD > BA   (d) CD > CA