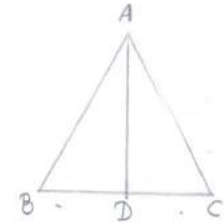①

Bal Bharati Public School GRH Marg
Summative Assesment 2
2016 - 17
Class VIII, Mathematics
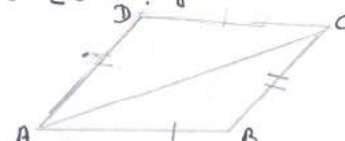Congruence of triangles (Assignment - 16)

Ques1. In figure, ABC is an isosceles triangle in which
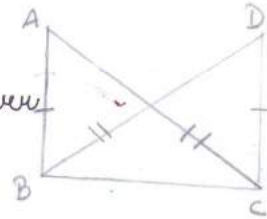AB = BC and D is the mid point of BC

(a) Is $\triangle ABD \cong \triangle ACD$?

(b) Name 3 pairs of matching parts used to
answer (a) above.

(c) Is $\angle B = \angle C$?

Ques 2. In the figure, equal sides have been marked by the
same signs. Is $\triangle ABC \cong \triangle CDA$? Is $\angle DAC = \angle BCA$? give reasons
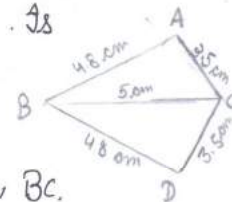in support of your answer.

Ques 3. In figure, equal sides have been marked by the same
signs.

(a) Is $\triangle ABC \cong \triangle DCB$?

(b) State 3 pairs of matching parts used to answer
part (a)

(c) Can we say $\triangle ABC \cong DBC$?

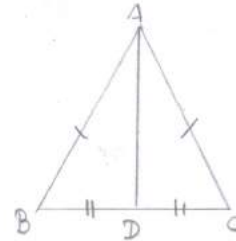**Ques 4.** In figure, lengths of equal sides are given. Is
$\triangle ABC \cong DBC$? Does BC bisects $\angle ABD$? give
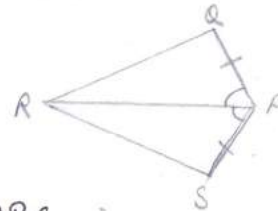reasons in support of your answer.

Ques 5. ABC is a triangle in which D is a point on BC.
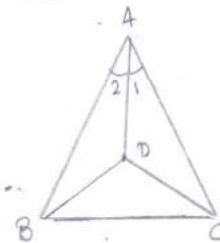Equal lengths have been marked by the same signs.

(a) Is $\triangle ABD \cong \triangle ACB$?

(b) Give reasons in support of your answer

(c) Is $\angle ABC = \angle ACB$?

(d) Which angle is equal to $\angle CAD$?

Ques 6. In figure, equal sides and angles have been marked by the same signs. Show that $\triangle PQR \cong \triangle PSR$ and hence find the angles equal to $\angle PQR$ and $\angle PRS$.
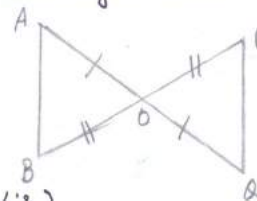
Ques 7. In figure, $AB = AC$ and $\angle 1 = \angle 2$ in $\triangle ABC$ Give reasons to show that

(a) $\angle ABD = \angle ACD$
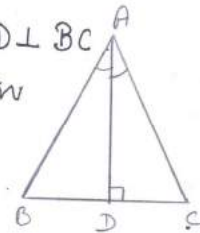
(b) $BD = CD$

(c) $\angle DBC = \angle DCB$

Ques 8. In figure, O is the mid-point of AQ and BP

(a) Is $\triangle OAB \cong \triangle OQP$?

(b) Which pairs of matching parts have you used to answer (a) ?

(c) Is $AB = PQ$?

(d) Is $\triangle OAB \cong \triangle OPQ$?

Hint : $\angle POQ = \angle BOA$ (vert. opp. $\angle$'s)

Ques 9. In figure, AD is the bisector of $\angle A$ such that $AD \perp BC$ Is ABC is an isosceles triangle ? Give reasons in support of your answer ?
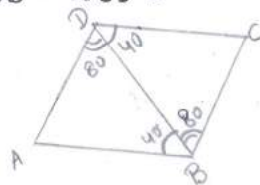
Ques 10. In figure , measurements of some angles are given. By giving reasons , tell whether $\triangle ABD \cong \triangle CDB$ Hence answer the following
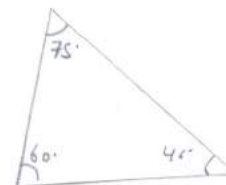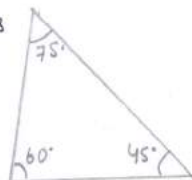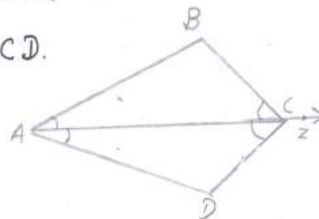
  (a)   Is $AD = BC$?

  (b)   Is $DC = AB$?

Ques 11. Are the given types of triangles always congruent ? If not , what minimum information will make them congruent ?
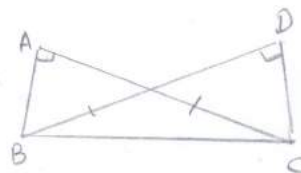
Ques 12. In figure , $\overrightarrow{AZ}$ bisects $\angle BAD$ and $\angle BCD$.

  (a)   Is $\triangle ABC \cong \triangle ADC$

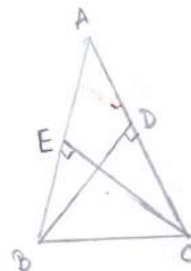 (b)   Is $BC = DC$? give reasons in support of your answer.

Ques 13. In $\triangle s$ ABC and DBC , right angled at A and D respectively , equal sides have been marked. Are the triangles congruent? Is $\angle ACB = \angle DBC$? give reasons in support of your answer.

Ques 14. In figure , BD and CE are altitudes of $\triangle ABC$ such that $BD = CE$

  (a)   Is $\triangle CBD \cong \triangle BCE$?

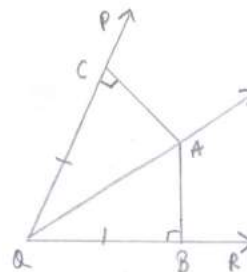 (b)   Is $\angle DCB = \angle EBC$? give reasons in support of your answer.

Ques 15. In figure,
AB $\perp$ QR,
AC $\perp$ QP and
$QC = QB$
  (a)   Is $\triangle AQB \cong \triangle AQC$?

Give reasons in support of your answer to (a)   ④
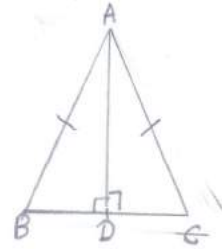
(b) Which angle is equal to ∠AQB?

Ques 16. ABC is an isosceles triangle such that AB = AC
AD is perpendicular to BC

(a) Is △ABD ≅ △ACD?

(b) Give pairs of matching part you have used to answer (a)

(c) Is ∠B = ∠C?

(d) Is D the midpoint of BC?

Ques 17. In figure, BC ⊥ AB, AD ⊥ AB and OC = OD. Also BC = AD

(a) Is △OBC ≅ △OAD? why

(b) Is OB = OA?
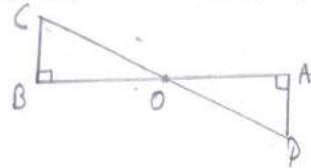
Ques 18. In figure, ∠P = ∠S = 90° and PQ = SR.
Is △PRQ ≅ △STR? Give reasons in support of your answer.