PRACTICE QUESTIONS
CLASS VII: CHAPTER - 7
CONGRUENCE OF TRIANGLES

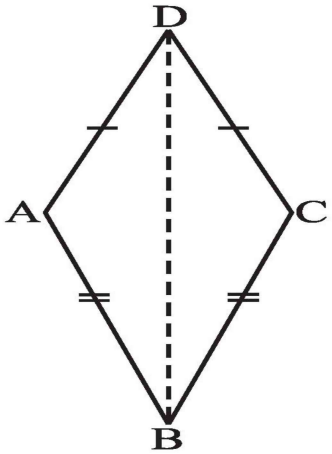
1. ΔABC and ΔPQR are congruent under the correspondence: ABC $\leftrightarrow$RQP. Write the parts of ΔABC that correspond to (i) $\angle P$ (ii) $\angle Q$ (iii) $\overline{RP}$

2. Complete the following statements:
   (a) Two line segments are congruent if _____.
   (b) Among two congruent angles, one has a measure of 70°; the measure of the other angle is _____.
   (c) When we write $\angle A = \angle B$, we actually mean _____.

3. If $\Delta ABC \cong \Delta FED$ under the correspondence ABC $\leftrightarrow$ FED, write all the corresponding congruent parts of the triangles.

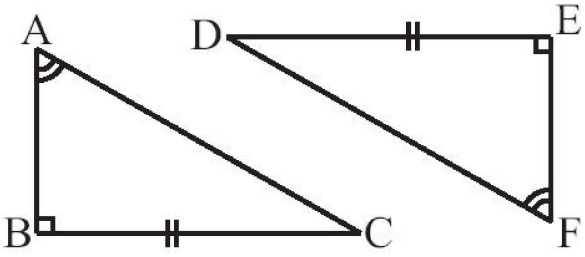
4. If $\Delta DEF \cong \Delta BCA$, write the part(s) of BCA that correspond to (i) $\angle E$ (ii) EF (iii) $\angle F$ (iv) DF

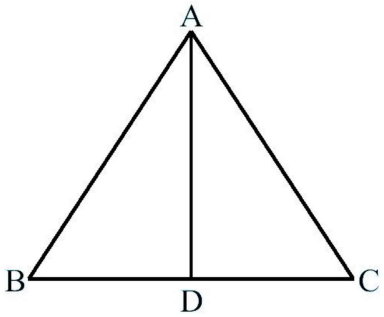
5. In triangles ABC and PQR, AB = 3.5 cm, BC = 7.1 cm, AC = 5 cm, PQ = 7.1 cm, QR = 5 cm and PR = 3.5 cm. Examine whether the two triangles are congruent or not. If yes, write the congruence relation in symbolic form.



6. In Fig AD = CD and AB = CB.
   (i) State the three pairs of equal parts in ΔABD and ΔCBD.
   (ii) Is $\Delta ABD \cong \Delta CBD$? Why or why not?
   (iii) Does BD bisect $\angle ABC$? Give reasons.

7. Explain, why $\Delta ABC \cong \Delta FED$ (see below figure).



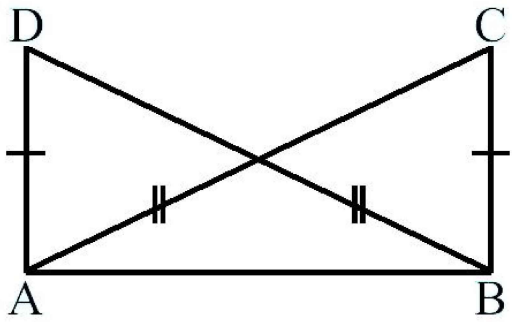


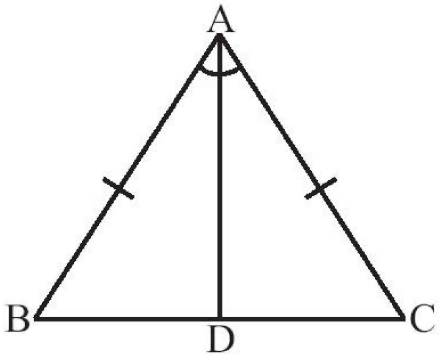
8. In the above sided Fig, AB = AC and D is the mid-point of BC
   (i) State the three pairs of equal parts in ΔADB and ΔADC.
   (ii) Is $\Delta ADB \cong \Delta ADC$? Give reasons.
   (iii) Is $\angle B = \angle C$? Why?

9. Which angle is included between the sides DE and EF of ΔDEF?

10. By applying ASA congruence rule, it is to be established that $\Delta ABC \cong \Delta QRP$ and it is given that BC = RP. What additional information is needed to establish the congruence?

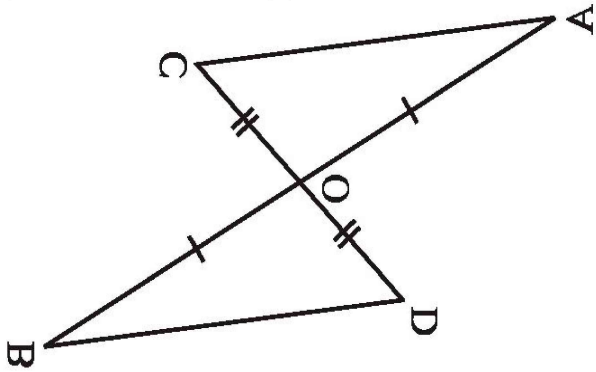
11. In Fig, AC = BD and AD = BC. Which of the following statements is meaningfully written?
(i) $\Delta ABC \cong \Delta ABD$ (ii) $\Delta ABC \cong \Delta BAD$.

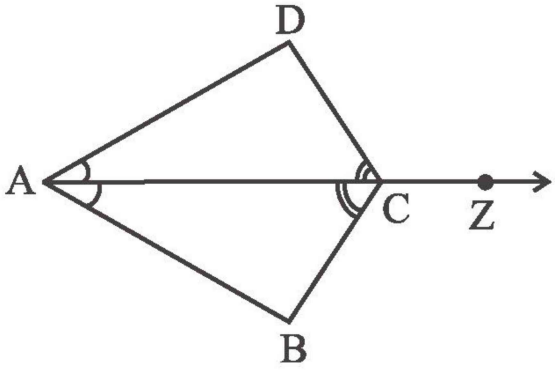




12. In the above sided Fig, AB = AC and AD is the bisector of $\angle BAC$.
(i) State three pairs of equal parts in triangles ADB and ADC.
(ii) Is $\Delta ADB \cong \Delta ADC$? Give reasons.
(iii) Is $\angle B = \angle C$? Give reasons.

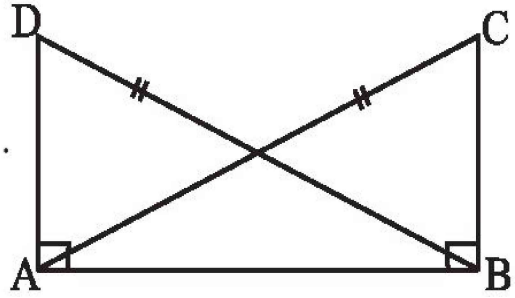
13. In the below Fig, AB and CD bisect each other at O.
(i) State the three pairs of equal parts in two triangles AOC and BOD.
(ii) Which of the following statements are true?
(a) $\Delta AOC \cong \Delta DOB$ (b) $\Delta AOC \cong \Delta BOD$

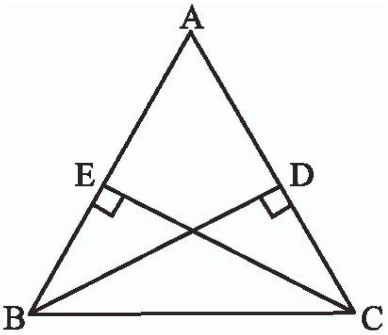




14. In the above sided Fig, ray AZ bisects $\angle DAB$ as well as $\angle DCB$.
(i) State the three pairs of equal parts in triangles BAC and DAC.
(ii) Is $\Delta BAC \cong \Delta DAC$? Give reasons.
(iii) Is AB = AD? Justify your answer.
(iv) Is CD = CB? Give reasons.

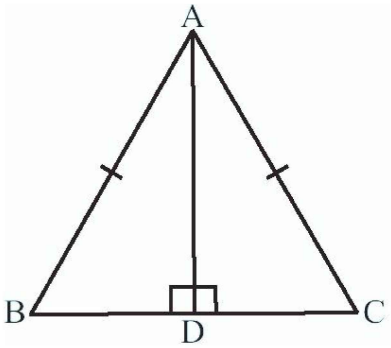
15. In Fig, DA $\perp$ AB, CB $\perp$ AB and AC = BD. State the three pairs of equal parts in ΔABC and ΔDAB. Which of the following statements is meaningful?
(i) $\Delta ABC \cong \Delta BAD$ (ii) $\Delta ABC \cong \Delta ABD$





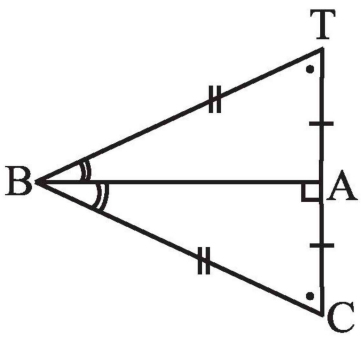
16. In the above sided Fig, BD and CE are altitudes of ΔABC such that BD = CE.
(i) State the three pairs of equal parts in ΔCBD and ΔBCE.
(ii) Is $\Delta CBD \cong \Delta BCE$? Why or why not?
(iii) Is $\angle DCB = \angle EBC$? Why or why not?

17. ABC is an isosceles triangle with AB = AC and AD is one of its altitudes.
(i) State the three pairs of equal parts in ΔADB and ΔADC.
(ii) Is ΔADB ≅ ΔADC? Why or why not?
(iii) Is ∠B = ∠C? Why or why not?
(iv) Is BD = CD? Why or why not?

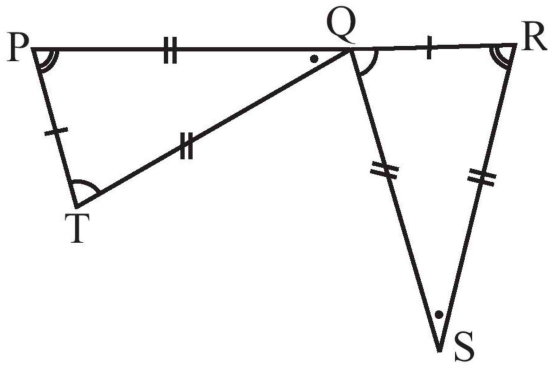


18. In ΔABC, ∠A = 30° , ∠B = 40° and ∠C = 110° and in ΔPQR, ∠P = 30° , ∠Q = 40° and ∠R = 110°. A student says that ΔABC ≅ ΔPQR by AAA congruence criterion.
Is he justified? Why or why not?

19. Complete the congruence statement:



ΔBCA ≅ ?



ΔQRS ≅ ?

20. If ΔABC and ΔPQR are to be congruent, name one additional pair of corresponding parts. What criterion did you use?