7 | TRIANGLES

EXERCISE 7.1

Q.1. *In quadrilateral ACBD, AC = AD and AB bisects ∠A (see Fig.). Show that ΔABC ≅ ΔABD. What can you say about BC and BD?*

Sol. In ΔABC and ΔABD, we have

$$AC = AD \qquad \text{[Given]}$$
$$\angle CAB = \angle DAB$$
$$[Q \ AB \ bisects \ \angle A]$$
$$AB = AB \qquad \text{[Common]}$$
$$\therefore \quad \Delta ABC \cong \Delta ABD.$$
[By SAS congruence] **Proved.**
Therefore, BC = BD. (CPCT). **Ans.**

Q.2. *ABCD is a quadrilateral in which AD = BC and ∠DAB = ∠CBA (see Fig.). Prove that*
(i) Δ ABD ≅ Δ BAC
(ii) BD = AC
(iii) ∠ ABD = ∠ BAC

Sol. In the given figure, ABCD is a quadrilateral in which AD = BC and ∠DAB = ∠CBA.
In ΔABD and ΔBAC, we have

$$AD = BC \qquad \text{[Given]}$$
$$\angle DAB = \angle CBA \qquad \text{[Given]}$$
$$AB = AB \qquad \text{[Common]}$$
$$\therefore \ \Delta ABD \cong \Delta BAC \qquad \text{[By SAS congruence]}$$
$$\therefore \quad BD = AC \qquad \text{[CPCT]}$$
$$\text{and} \ \angle ABD = \angle BAC \qquad \text{[CPCT]}$$
Proved

Q.3. *AD and BC are equal perpendiculars to a line segment AB (see Fig.). Show that CD bisects AB.*

Sol. In ΔAOD and ΔBOC, we have,

$$\angle AOD = \angle BOC$$
[Vertically opposite angles)
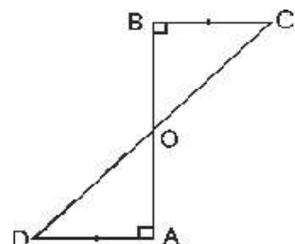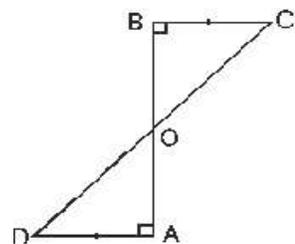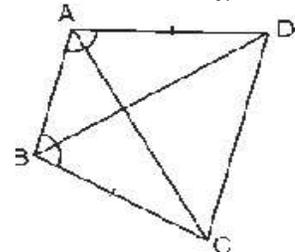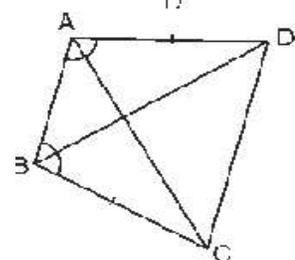$$\angle CBO = \angle DAO \qquad \text{[Each = 90°]}$$
$$\text{and} \qquad AD = BC \qquad \text{[Given]}$$
$$\therefore \qquad \Delta AOD \cong \Delta BOC \qquad \text{[By AAS congruence]}$$
Also, AO = BO [CPCT]
Hence, CD bisects AB **Proved.**
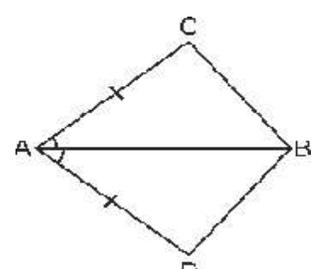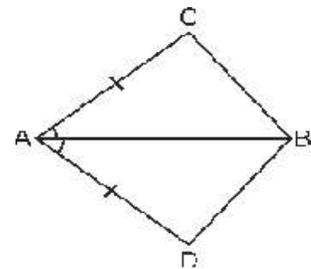
Q.4. *l and m are two parallel lines intersected by another pair of parallel lines p and q (see Fig.). Show that $\triangle ABC \cong \triangle CDA$.*

Sol. In the given figure, ABCD is a parallelogram in which AC is a diagonal, i.e., AB || DC and BC || AD.

In $\triangle$ ABC and $\triangle$ CDA, we have,

$$\angle BAC = \angle DCA \qquad \text{[Alternate angles]}$$
$$\angle BCA = \angle DAC$$
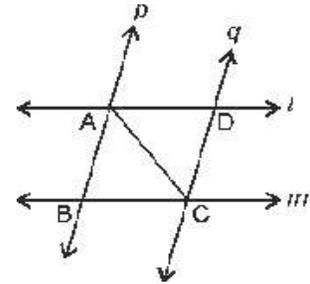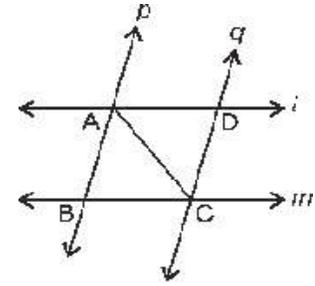$$\text{[Alternate angles]}$$
$$AC = AC \qquad \text{[Common]}$$
$$\therefore \quad \triangle ABC \cong \triangle CDA \quad \text{[By ASA congruence]}$$

Proved.

Q.5. *Line l is the bisector of an angle A and B is any point on l. BP and BQ are perpendiculars from B to the arms of $\angle A$ (see Fig.). Show that :*
(i) $\triangle APB \cong \triangle AQB$
(ii) BP = BQ or B is equidistant from the arms of $\angle A$.

Sol. In $\triangle$ APB and $\triangle$ AQB, we have
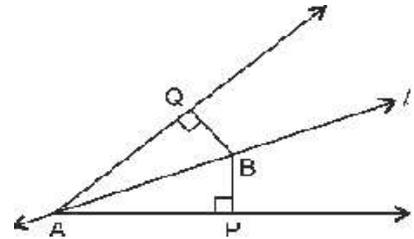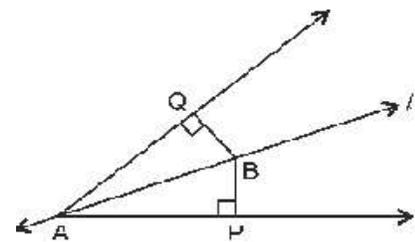$$\angle PAB = \angle QAB$$
$$\text{[l is the bisector of } \angle A]$$
$$\angle APB = \angle AQB \qquad \text{[Each = 90°]}$$
$$AB = AB \qquad \text{[Common]}$$
$$\therefore \ \triangle APB \cong \triangle AQB \ \text{[By AAS congruence]}$$
Also, BP = BQ $\qquad$ [By CPCT]
i.e., B is equidistant from the arms of $\angle A$. **Proved**

Q.6. *In the figure, AC = AE, AB = AD and $\angle BAD = \angle EAC$. Show that BC = DE.*

Sol. $\angle BAD = \angle EAC$ [Given]
$$\Rightarrow \angle BAD + \angle DAC = \angle EAC + \angle DAC$$
$$\text{[Adding } \angle DAC \text{ to both sides]}$$
$$\Rightarrow \qquad \angle BAC = \angle EAC \qquad \text{... (i)}$$
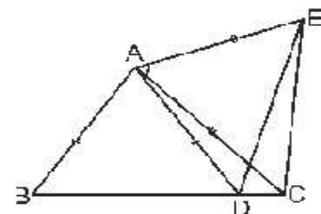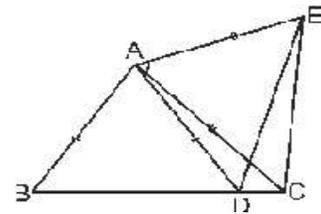Now, in $\triangle$ABC and $\triangle$ADE, we have
$$AB = AD \qquad \text{[Given]}$$
$$AC = AE \qquad \text{[Given)}$$
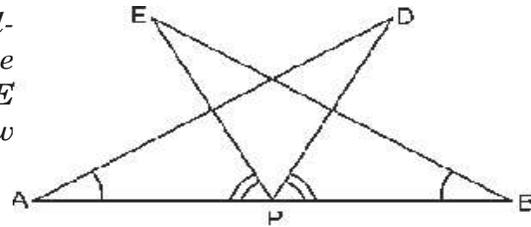$$\Rightarrow \qquad \angle BAC = \angle DAE \ \text{[From (i)]}$$
$$\therefore \qquad \triangle ABC \cong \triangle ADE \qquad \text{[By SAS congruence]}$$
$$\Rightarrow \qquad BC = DE. \qquad \text{[CPCT]} \quad \textbf{Proved.}$$

Q.7. *AB is a line segment and P is its mid-point. D and E are points on the same side of AB such that $\angle BAD = \angle ABE$ and $\angle EPA = \angle DPB$ (see Fig.). Show that*

(i) $\Delta DAP \cong \Delta EBP$ (ii) $AD = BE$

Sol. In ΔDAP and ΔEBP, we have

$\qquad$ AP = BP   [Q P is the mid-

$\qquad\qquad$ point of line segment AB]

$\qquad$ $\angle$BAD = $\angle$ABE   [Given]

$\qquad$ $\angle$EPB = $\angle$DPA

$\qquad$ [Q $\angle$EPA = $\angle$DPB $\Rightarrow$ $\angle$EPA + $\angle$DPE

$\qquad\qquad\qquad$ = $\angle$DPB + $\angle$DPE]

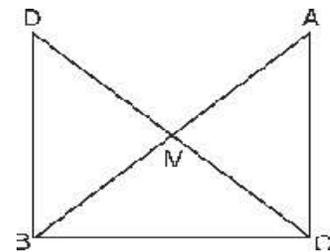$\therefore$ Δ DPA $\cong$ Δ EPB $\qquad\qquad$ [ASA]

$\Rightarrow$ AD = BE   [By CPCT] **Proved.**
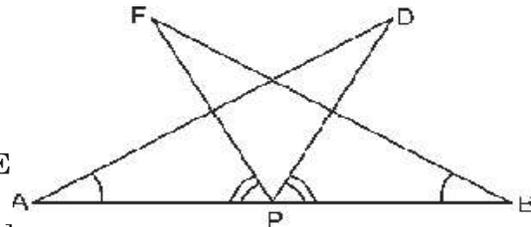
Q.8. *In right triangle ABC, right angled at C, M is the mid-point of hypotenuse AB. C is joined to M and produced to a point D such that DM = CM. Point D is joined to point B (see Fig.). Show that :*

(i) $\Delta AMC \cong \Delta BMD$

(ii) $\angle DBC$ is a right angle.

(iii) $\Delta DBC \cong \Delta ACB$

(iv) $CM = \dfrac{1}{2} AB$

Sol. In ΔBMB and ΔDMC, we have

(i) DM = CM $\qquad\qquad\qquad$ [Given]

$\qquad$ BM = AM

$\qquad\qquad\qquad$ [Q M is the mid-point of AB]

$\qquad$ $\angle$DMB = $\angle$AMC

$\qquad\qquad\qquad$ [Vertically opposite angles]

$\therefore$ ΔAMC $\cong$ ΔBMD $\qquad$ [By SAS]

$\qquad\qquad\qquad\qquad\qquad\qquad$ **Proved.**

(ii) $\qquad$ AC || BD [Q $\angle$DBM and $\angle$CAM are alternate angles]

$\qquad$ $\Rightarrow$ $\angle$DBC + $\angle$ACB = 180°   [Sum of co-interior angles]

$\qquad\qquad\qquad\qquad$ [Q $\angle$ACB = 90°] **Proved.**

$\qquad$ $\Rightarrow$ $\qquad\qquad$ $\angle$DBC = 90° **Proved.**

(iii) In ΔDBC and ΔACB, we have

$\qquad\qquad$ DB = AC $\qquad\qquad\qquad\qquad\qquad\qquad$ [CPCT]

$\qquad\qquad$ BC = BC $\qquad\qquad\qquad\qquad\qquad\qquad$ [Common]

$\qquad\qquad$ $\angle$DBC = $\angle$ACB $\qquad\qquad\qquad\qquad$ [Each = 90°]

$\therefore$ ΔDBC $\cong$ ΔACB $\qquad\qquad\qquad$ [By SAS] **Proved.**

(iv) $\therefore$ $\qquad$ AB = CD $\qquad\qquad\qquad\qquad\qquad\qquad$ [CPCT]

$\qquad$ $\Rightarrow$ $\quad$ $\dfrac{1}{2}$ AB = $\dfrac{1}{2}$ CD

$\qquad$ Hence, $\dfrac{1}{2}$ AB = CM $\qquad\qquad$ [CM = $\dfrac{1}{2}$ CD] **Proved.**
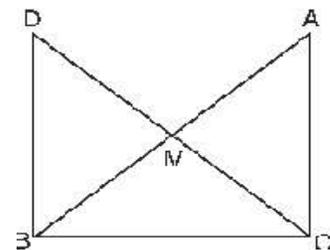
7 | TRIANGLES

EXERCISE 7.2

Q.1. *In an isosceles triangle ABC, with AB = AC, the bisectors of ∠B and ∠C intersect each other at O. Join A to O. Show that :*
(i) OB = OC (ii) AO bisects ∠A.

Sol. (i) AB = AC ⇒ ∠ABC = ∠ACB   [Angles opposite to equal sides are equal]

$$\frac{1}{2}\angle ABC = \frac{1}{2}\angle ACB$$

⇒ ∠CBO = ∠BCO

[OB and OC are bisectors of

∠B and ∠C respectively]

⇒   OB = OC   [Sides opposite to equal angles are equal]

Again, $\angle \frac{1}{2}ABC = \frac{1}{2}\angle ACB$

⇒∠ABO = ∠ACO   [∴ OB and OC are bisectors of ∠B
                              and ∠C respectively]

In ΔABO and ΔACO, we have
          AB = AC   [Given]
          OB = OC   [Proved above]
       ∠ABO = ∠ACO   [Proved above]
   ∴ ΔABO ≅ ΔACO   [SAS congruence]
   ⇒ ΔABO = ∠CAO   [CPCT]
   ⇒ AO bisects ∠A   **Proved.**
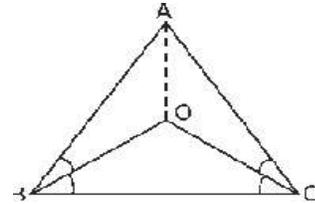
Q.2. *In Δ ABC, AD is the perpendicular bisector of BC (see Fig.). Show that Δ ABC is an isosceles triangle in which AB = AC.*

Sol. In ΔABD and ΔACD, we have
          ∠ADB = ∠ADC   [Each = 90°]
          BD = CD [Q AD bisects BC]
          AD = AD   [Common]
   ∴ ΔABD ≅ ΔACD   [SAS]
   ∴   AB = AC   [CPCT]
          Hence, ΔABC is an isosceles triangle. **Proved.**
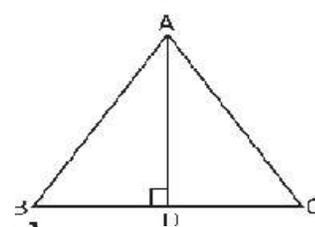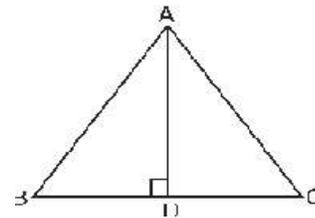
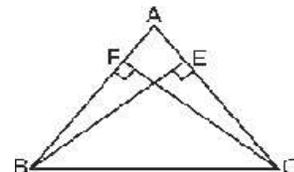**Q.3.** *ABC is an isosceles triangle in which altitudes BE and CF are drawn to equal sides AC and AB respectively (see Fig.). Show that these altitudes are equal.*
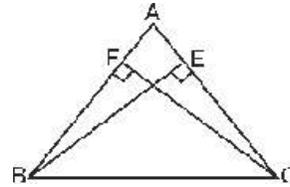
Sol. In ΔABC,
          AB = AC   [Given]
   ⇒   ∠B = ∠C   [Angles opposite to equal sides of a triangle are equal]

Now, in right triangles BFC and CEB,

∠BFC = ∠CEB   [Each = 90°]
∠FBC = ∠ECB   [Pproved above]
BC = BC   [Common]
∴   ΔBFC ≅ ΔCEB   [AAS]
Hence, BE = CF   [CPCT] **Proved.**

Q.4. *ABC is a triangle in which altitudes BE and CF to sides AC and AB are equal (see Fig.). Show that*
   (i) Δ ABE ≅ Δ ACF
   (ii) AB = AC, i.e., ABC is an isosceles triangle.
  Sol. (i) In Δ ABE and ACF, we have
         BE = CF   [Given]
      ∠BAE = ∠CAF   [Common]
      ∠BEA = ∠CFA   [Each = 90°]
  So, ΔABE ≅ ∠ACF   [AAS] **Proved.**
  (ii) Also, AB = AC   [CPCT]
    i.e., ABC is an isosceles triangle **Proved.**
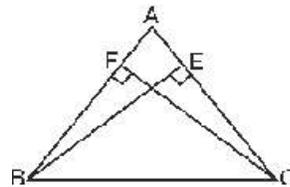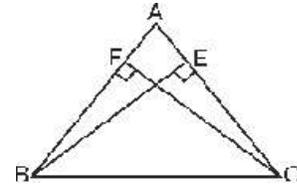
Q.5. *ABC and DBC are two isosceles triangles on the same base BC (see Fig.). Show that ∠ABD = ∠ACD.*
Sol. In isosceles ΔABC, we have
       AB = AC
     ∠ABC = ∠ACB   …(i)
           [Angles opposite to equal sides are equal]
  Now, in isosceles ΔDCB, we have
       BD = CD
     ∠DBC = ∠DCB   …(ii)
           [Angles opposite to equal sides are equal]
  Adding (i) and (ii), we have
  ∠ABC + ∠DBC = ∠ACB + ∠DCB
  ⇒ ∠ABD = ∠ACD **Proved.**

Q.6. *Δ ABC is an isosceles triangle in which AB = AC. Side BA is produced to D such that AD = AB (see Fig.). Show that ∠BCD is a right angle.*
Sol.   AB = AC   [Given]
      ∠ACB = ∠ABC   …(i)
          [Angles opposite to equal sides are equal]
       AB = AD   [Given]
 ∴   AD = AC   [Q AB = AC]
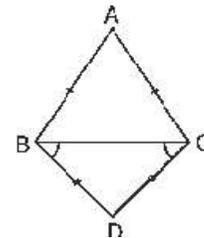 ∴ ∠ACD = ∠ADC …(ii)   [Angles opposite to equal sides are equal]
  Adding (i) and (ii)
      ∠ACB + ∠ACD = ∠ABC + ∠ADC
        ⇒   ∠BCD = ∠ABC + ∠ADC   …(iii)
  Now, in ΔBCD, we have
  ∠BCD + ∠DBC + ∠BDC = 180°   [Angle sum property of a triangle]
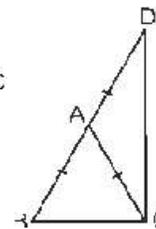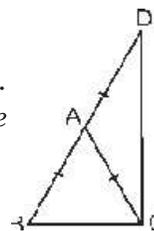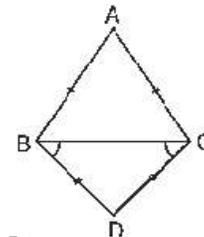
$$\therefore \qquad \angle BCD + \angle BCD = 180°$$
$$\Rightarrow \qquad\qquad 2\angle BCD = 180°$$
$$\Rightarrow \qquad\qquad \angle BCD = 90°$$

Hence, $\angle BCD = 90°$ or a right angle **Proved.**

Q.7. *ABC is a right angled triangle in which $\angle A = 90°$ and AB = AC. Find $\angle B$ and $\angle C$.*
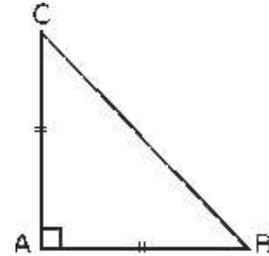
Sol. In $\triangle ABC$, we have

$$\left.\begin{array}{l} \angle A = 90° \\ \text{and AB = AC} \end{array}\right\} \text{[Given]}$$

We know that angles opposite to equal sides of an isosceles triangle are equal.

So, $\angle B = \angle C$

Since, $\angle A = 90°$, therefore sum of remaining two angles = 90°.

Hence, $\angle B = \angle C = 45°$ **Answer.**

Q.8. *Show that the angles of an equilateral triangle are 60° each.*

Sol. As $\triangle ABC$ is an equilateral.

So, AB = BC = AC

Now, AB = AC

$\Rightarrow \angle ACB = \angle ABC \qquad …(i)$

[Angles opposite to equal sides of a triangle are equal]

Again, BC = AC

$\Rightarrow \angle BAC = \angle ABC \quad …(ii) \qquad$ [same reason]

Now, in $\triangle ABC$,

$\angle ABC + \angle ACB + \angle BAC = 180° \qquad$ [Angle sum property of a triangle]

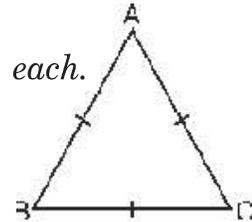$\Rightarrow \angle ABC + \angle ABC + \angle ABC = 180° \qquad$ [From (i) and (ii)]

$\Rightarrow 3 \angle ABC = 180°$

$$\Rightarrow \angle ABC = \frac{180°}{3} = 60°$$

Also, from (i) and (ii)

$\angle ACB = 60°$ and $\angle BAC = 60°$

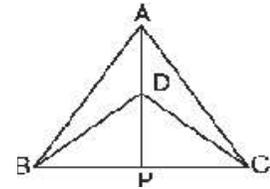Hence, each angle of an equilateral triangle is 60° **Proved.**

7 | TRIANGLES

EXERCISE 7.3

Q.1. $\triangle ABC$ and $\triangle DBC$ are two isosceles triangles on the same base BC and vertices A and D are on the same side of BC (see Fig.). If AD is extended to intersect BC at P, show that
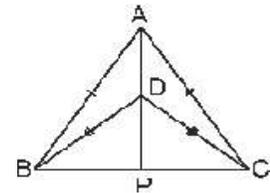
(i) $\triangle ABD \cong \triangle ACD$

(ii) $\triangle ABP \cong \triangle ACP$

(iii) AP bisects $\angle A$ as well as $\angle D$.

(iv) AP is the perpendicular bisector of BC.

Sol. (i) In $\triangle ABD$ and $\triangle ACD$, we have

$$AB = AC \qquad \text{[Given]}$$
$$BD = CD \qquad \text{[Given]}$$
$$AD = AD \qquad \text{[Common]}$$
$$\therefore \ \triangle ABD \cong \triangle ACD \ \text{[SSS congruence]} \qquad \textbf{Proved.}$$

(ii) In $\triangle ABP$ and $\triangle ACP$, we have

$$AB = AC \qquad \text{[Given]}$$
$$\angle BAP = \angle CAP \qquad [\text{Q} \ \angle BAD = \angle CAD, \text{ by CPCT}]$$
$$AP = AP \qquad \text{[Common]}$$
$$\therefore \ \triangle ABP \cong \triangle ACP \qquad \text{[SAS congruence]} \ \textbf{Proved.}$$

(iii)
$$\triangle ABD \cong \triangle ADC \qquad \text{[From part (i)]}$$
$$\Rightarrow \quad \angle ADB = \angle ADC \qquad \text{(CPCT)}$$
$$\Rightarrow 180° - \angle ADB = 180° - \angle ADC$$
$$\Rightarrow \text{Also, from part (ii), } \angle BAPD = \angle CAP \qquad \text{[CPCT]}$$
$$\therefore \text{ AP bisects } \text{Ð}A \text{ as well as } \angle D. \ \textbf{Proved.}$$

(iv) Now, BP = CP

and $\angle BPA = \angle CPA$ [By CPCT]

But $\angle BPA + \angle CPA = 180°$ [Linear pair]

So, $2\angle BPA = 180°$

Or, $\angle BPA = 90°$

Since BP = CP, therefore AP is perpendicular bisector of BC.

Proved.

Q.2. *AD is an altitude of an isosceles triangle ABC in which AB = AC. Show that*

    (i) AD bisects BC   (ii) AD bisects $\angle A$.

Sol. (i) In $\triangle ABD$ and $\triangle ACD$, we have

$$\angle ADB = \angle ADC \quad [\text{Each} = 90°]$$
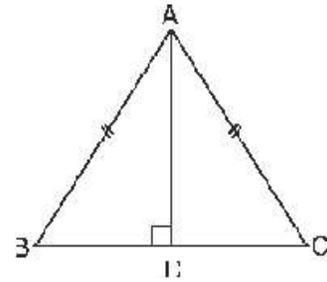$$AB = AC \quad [\text{Given}]$$
$$AD = AD \quad [\text{Common}]$$
$$\therefore \triangle ABD \cong \triangle ACD \quad [\text{RHS congruence}]$$
$$\therefore \quad BD = CD \quad [\text{CPCT}]$$

Hence, AD bisects BC.

(ii) Also, $\angle BAD = \angle CAD$

Hence AD bisects $\angle A$ **Proved**

Q.3. *Two sides AB and BC and median AM of one triangle ABC are respectively equal to sides PQ and QR and median PN of $\triangle PQR$ (see Fig.). Show that :*

    (i) $\triangle ABM \cong \triangle PQN$ (ii) $\triangle ABC \cong \triangle PQR$

Sol. (i) In $\triangle ABM$ and $\triangle PQN$, we have

$$BM = QN$$
$$[\text{Q}\ \ BC = QR$$
$$\Rightarrow \frac{1}{2} BC = \frac{1}{2} QR]$$
$$AB = PQ \quad [\text{Given}]$$
$$AM = PN \quad [\text{Given}]$$
$$\therefore \triangle ABM \cong \triangle PQN \ [\text{SSS congruence}] \quad \textbf{Proved.}$$
$$\Rightarrow \angle ABM = \angle PQN \quad [\text{CPCT}]$$

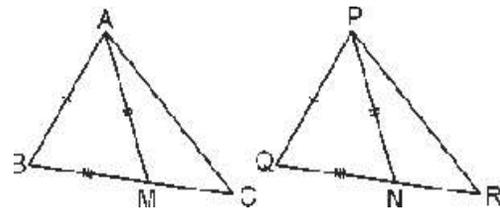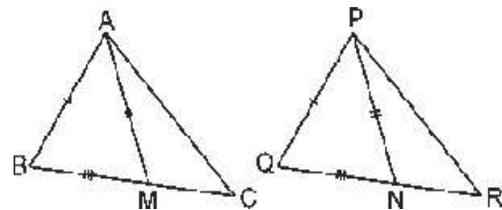(ii) Now, in $\triangle ABC$ and $\triangle PQR$, we have

$$AB = PQ \quad [\text{Given}]$$
$$\angle ABC = \angle PQR \quad [\text{Proved above}]$$
$$BC = QR \quad [\text{Given}]$$
$$\therefore \triangle ABC \cong \triangle PQR \ [\text{SAS congruence}] \quad \textbf{Proved.}$$

Q.4. *BE and CF are two equal altitudes of a triangle ABC. Using RHS congruence rule, prove that the triangle ABC is isosceles.*

Sol. BE and CF are altitudes of a ΔABC.

∴ ∠BEC = ∠CFB = 90°

Now, in right triangles BEB and CFB, we have

Hyp. BC = Hyp. BC   [Common]

Side BE= Side CF   [Given]

∴   ΔBEC ≅ ΔCFB   [By RHS congruence rule]

∴ ∠BCE = ∠CBF   [CPCT]

Now, in ΔABC, ∠B = ∠C

∴   AB = AC   [Sides opposite to equal angles are equal]

Hence, ΔABC is an isosceles triangle.   **Proved.**
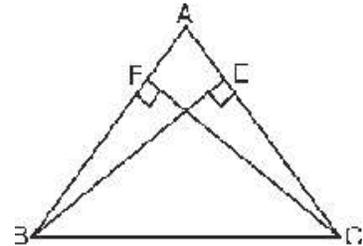
Q.5. *ABC is an isosceles triangle with AB = AC. Draw AP ⊥ BC to show that ∠B = ∠C.*

Sol. Draw AP ⊥ BC.

In ΔABP and ΔACP, we have

      AB = AC   [Given]

   ∠APB = ∠APC   [Each = 90°]

      AB = AP   [Common]

∴ ΔABP ≅ ΔACP   [By RHS congruence rule]

Also, ∠B = ∠C **Proved.** [CPCT]
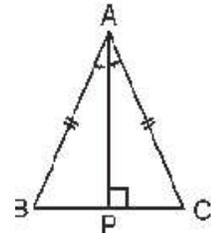
7 | TRIANGLES

EXERCISE 7.4

Q.1. *Show that in a right angled triangle, the hypotenuse is the longest side.*

Sol. ABC is a right triangle, right angled at B.

Now, $\angle A + \angle C = 90°$

$\Rightarrow$ Angles A and C are each less than 90°.

Now, $\qquad \angle B > \angle A$

$\Rightarrow \qquad\qquad AC > BC \qquad\qquad$ ...(i)

$\qquad$ [Side opposite to greater angle is longer]

Again, $\qquad \angle B > \angle C$

$\Rightarrow \qquad\qquad AC > AB \qquad\qquad$ ...(ii)

$\qquad$ [Side opposite to greater angle is longer]

Hence, from (i) and (ii), we can say that AC (Hypotenuse) is the longest side. **Proved**
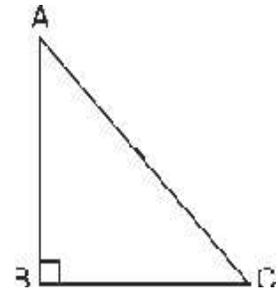
Q.2. *In the figure, sides AB and AC of $\triangle ABC$ are extended to points P and Q respectively. Also, $\angle PBC < \angle QCB$. Show that AC > AB.*

Sol. $\angle ABC + \angle PBC = 180°$ [Linear pair]

$\Rightarrow \qquad\qquad \angle ABC = 180° - \angle PBC \qquad$ ...(i)

Similarly, $\angle ACB = 180° - \angle QCB \qquad$ ...(ii)

It is given that $\angle PBC < \angle QCB$

$\therefore \qquad\qquad 180° - \angle QCB < 180° - \angle PBC$

Or $\qquad \angle ACB < \angle ABC$ [From (i) and (ii)]

$\Rightarrow \qquad\qquad AB < AC$

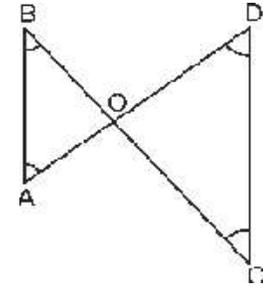$\Rightarrow \qquad\qquad AC > AB \qquad\qquad$ **Proved.**
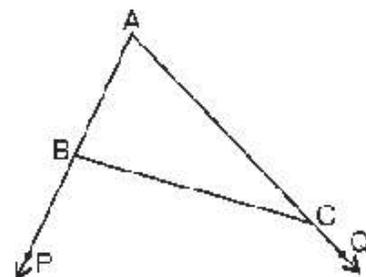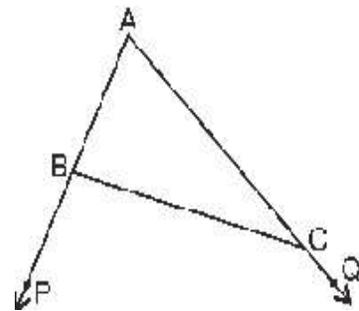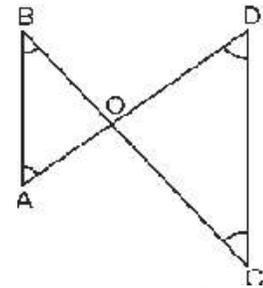
Q.3. *In the figure, $\angle B < \angle A$ and $\angle C < \angle D$. Show that AD < BC.*

Sol. $\angle B < \angle A$ [Given]

       BO > AO   ...(i)

[Side opposite to greater angle is longer]

             $\angle C < \angle D$ [Given]

$\Rightarrow$ CO > DO   ...(ii)

                 [Same reason]

Adding (i) and (ii)

       BO + CO > AO + DO

$\Rightarrow$ BC > AD

          AD < BC   **Proved.**

Q.4. *AB and CD are respectively the smallest and longest sides of a quadrilateral ABCD (see Fig.). Show that $\angle A > \angle C$ and $\angle B > \angle D$.*

Sol. Join AC.

Mark the angles as shown in the figure.

In $\triangle ABC$,

      BC > AB   [AB is the shortest side]

$\Rightarrow$ $\angle 2 > \angle 4$ ...(i)

[Angle opposite to longer side is greater]

In $\triangle ADC$,

      CD > AD   [CD is the longest side]

      $\angle 1 > \angle 3$ ...(ii)
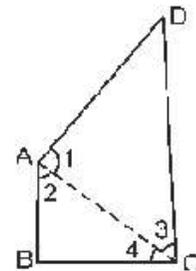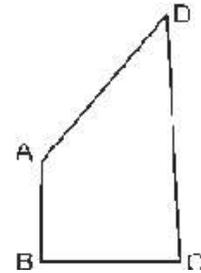
[Angle opposite to longer side is greater]

Adding (i) and (ii), we have

        $\angle 2 + \angle 1 > \angle 4 + \angle 3$

$\Rightarrow$ $\angle A > \angle C$ **Proved.**

Similarly, by joining BD, we can prove that

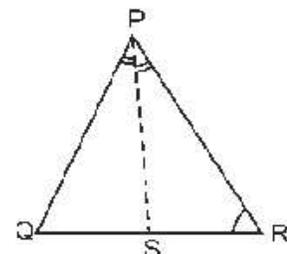 $\angle B > \angle D$.

Q.5. *In the figure, PR > PQ and PS bisects $\angle QPR$. Prove that $\angle PSR > \angle PSQ$.*

Sol.   PR > PQ

     $\angle PQR > \angle PRQ$ ...(i)

[Angle opposite to longer side is greater]

     $\angle QPS > \angle RPS$ [∵ PS bisects $\angle QPR$] ...(ii)

In ΔPQS, ∠PQS + ∠QPS + ∠PSQ = 180°

⇒ ∠PSQ = 180° − (∠PQS + ∠QPS)   …(iii)

Similarly in ΔPRS, ΔPSR = 180° − (∠PRS + ∠RPS)

⇒ ∠PSR = 180° − (∠PRS + ∠QPS) [from (ii) ... (iv)

From (i), we know that ∠PQS < ∠PSR

So from (iii) and Iiv), ∠PSQ < ∠PSR

⇒ ∠PSR > ∠PSQ **Proved**
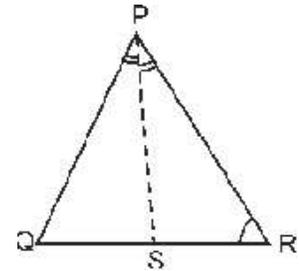
Q.6. *Show that of all the segments drawn from a given point not on it, the perpendicular line segment is the shortest.*

Sol. We have A line $\overleftrightarrow{l}$ and O is a point not on $\overleftrightarrow{l}$.

OP ⊥ $\overleftrightarrow{l}$.

We have to prove that OP < OQ, OP < OR and OP < OS.

In ΔOPQ, ∠P = 90°

∴ ∠Q is an acute angle (i.e., ∠Q < 90°]

∴ ∠Q < ∠P

Hence, OP < OQ   [Side opposite to greater angle is longer]

Similarly, we can prove that OP is shorter than OR, OS etc. **Proved.**
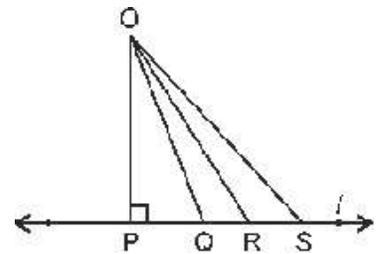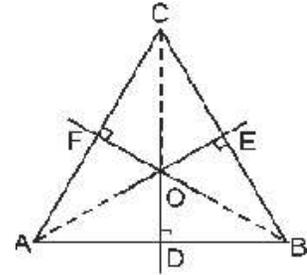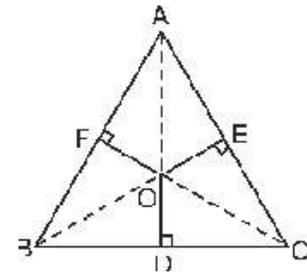
7 | TRIANGLES

EXERCISE 7.5 (OPTIONAL)

Q.1. *ABC is a triangle. Locate a point in the interior of △ABC which is equidistant from all the vertices of △ABC.*

Sol. Draw perpendicular bisectors of sides AB, BC and CA, which meets at O.
Hence, O is the required point.

Q.2. *In a triangle locate a point in its interior which is equidistant from all the sides of the triangle.*

Sol.

Q.3. *In a huge park, people are concentrated at three points (see Fig.).*
A : where there are different slides and swings for
   children,
B : near which a man-made lake is situated,
C : which is near to a large parking and exit.
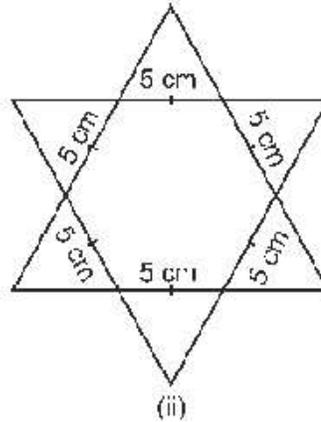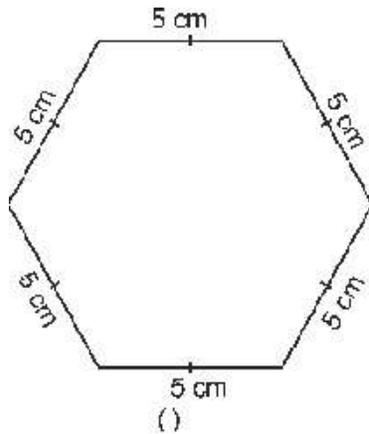*Where should an icecream parlour be set up so that maximum number of persons can approach it?*

Draw bisectors ∠A, ∠B and ∠C of △ABC. Let these angle bisectors meet at O.
O is the required point.

Sol. Join AB, BC and CA to get a triangle ABC. Draw the perpendicular bisector of AB and BC. Let they meet at O. Then O is equidistant from A, B and C. Hence, the icecream pra

Q.4. *Complete the hexagonal and star shaped Rangolies [see Fig. (i) and (ii)] by filling them with as many equilateral triangles of side 1 cm as you can. Count the number of triangles in each case. Which has more triangles?*

Sol.