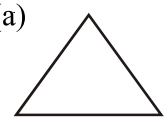
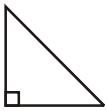
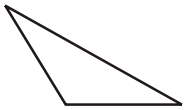
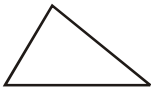
Chapter—6

The Triangle and its Properties

1. Which of the following figures will have its altitude outside the triangle.

(a)  (b)  (c)  (d) 

2. Fill up the blanks :

(i) Every triangle has at least ..... acute angles.

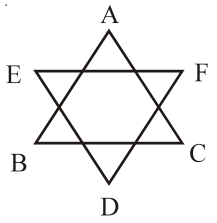
(ii) The longest side of a right angled triangle is called its .....

(iii) Median is also called ..... in an equilateral triangle.

(iv) The line segment joining a vertex of a triangle to the mid-point of its opposite side is called its.....

3. If one angle of a triangle is 60° and the other two angles are in the ratio 1 : 2, then find the angles.

4. In figure find the vlue of $\angle A + \angle B + \angle C + \angle D + \angle E + \angle F$

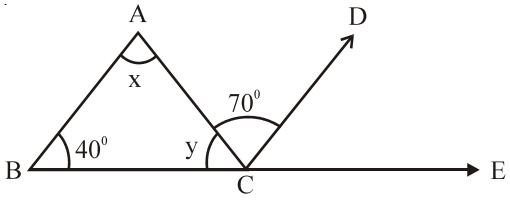


5. Two poles of 8m and 14m stand upright on a plane ground. If the distance between two tops is 10m. Find the distance between their feet.

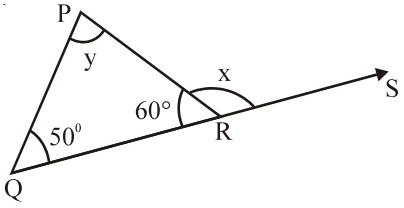
6. Mohini walks 1200m due East and then 500m due North. How far is she from her starting point?

7. Find the value of x and y.

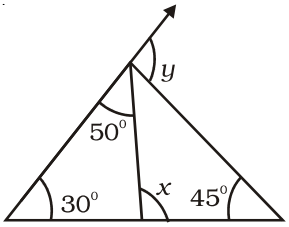
(i) Here CD || AB



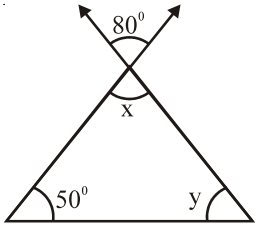
(ii)



(iii)

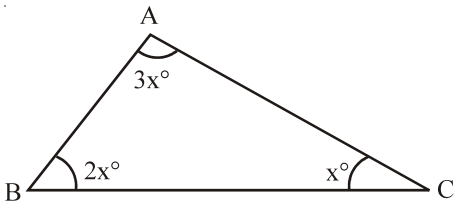


(iv)

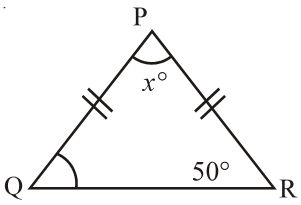


8. Find the value of x :

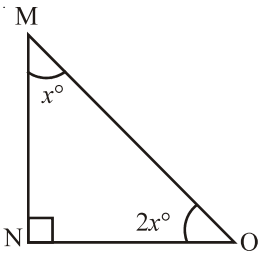
(i)



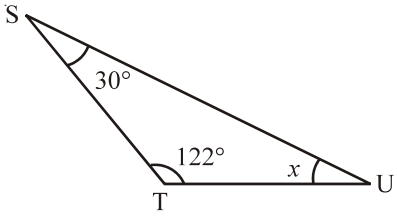
(ii)



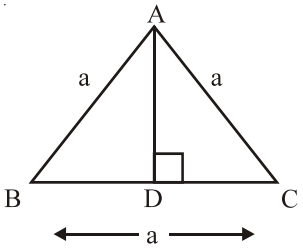
(iii)



(iv)



9. ABC is an equilateral triangle with side a. AD is an altitude. Find the value of AD^2.



10. State whether the given statements are True or False :

(i) Sum of two sides of a triangle is greater than or equal to the third side.

(ii) The difference between the lengths of any two sides of a triangle is smaller than the length of third side.

(iii) Sum of any two angles of a triangle is always greater than the third angle.

(iv) It is possible to have a right angled equilateral triangle.