Instructions for students: The notes provided must be copied to the Maths copy and then do the homework in the same copy.

Class 7-Mathematics

Chapter 13

CONSTRUCTION OF SIMPLE TRIANGLES

Note: Construct triangles along with the steps given below.

1. **Constructing triangles when the lengths of three sides are given:**

Eg. Construct triangle PQR in which PQ = 5.4 cm, QR = PR = 4.7 cm

Steps:

   1. Draw PQ = 5.4 cm.
   2. With P as centre and radius 4.7 cm, draw an arc.
   3. With Q as centre and radius 4.7 cm, draw an arc to cut the previous arc at R.
   4. Join PR and QR.

2. **Constructing triangles when measure of two sides and included angle are given.**

Eg. Construct triangle DEF in which DE = 5 cm, DF = 3 cm and angle EDF = 90°

Steps:

   1. Draw DE= 5 cm
   2. Draw 90° at the point D.
   3. With D as centre and radius 3 cm draw an arc to meet the arm of the angle at F.
   4. Join DF.

3. **Constructing triangles when measure of two angles and included side are given.**

Eg. Construct triangle XYZ in which XY = 6 cm, angle X= 30° and angle Y = 100°

Steps:

   1. Draw XY= 6 cm
   2. Draw 30° the point X using compass.
   3. Draw 100° the point Y using protractor.
   4. The point at which the arms of these angles meet is the point Z.

4. Constructing right angled triangles when measure of one side and hypotenuse are given.

Eg. Construct right angled triangle in which hypotenuse is 6 m and one of the sides is 4 cm long.

Steps:

5. Draw AB= 4 cm
6. Draw 90° at the point A.
7. With B as centre and radius 6 cm draw an arc to meet the arm of the angle at C.
8. Join BC.

Home work: Draw constructions 4 to 14 of exercise 13 in the Maths copy.