

**Class: 6**  
**Subject: Mathematics**  
**Topic: Elementary Geometry**  
**No. of Questions: 16**

- Q1. With the same center O, draw two circles of radii 4 cm and 2.5 cm.
- Q2. Draw any circle and mark points A, B and C such that:
- (a) A is on the circle.
  - (b) B is in the interior of the circle
  - (c) C is the exterior of the circle
- Q3. Draw a line segment of length 7.3 cm, using a ruler.
- Q4. Construct  $\overline{AB}$  of length 7.8 cm. From this cut off  $\overline{AC}$  of length 4.7 cm. Measure  $\overline{BC}$ .
- Q5. Given  $\overline{AB}$  of length 7.3 cm and  $\overline{CD}$  of length 3.4 cm, construct a line segment  $\overline{XY}$  and  $\overline{CD}$ . Verify by measurement.
- Q6. Draw any line segment  $\overline{AB}$ . Mark any point M on it. Through M draw a perpendicular to  $\overline{AB}$ . (use ruler and compass)
- Q7. Draw a line  $l$  and a point X on it. Through X, draw a line segment  $\overline{XY}$  perpendicular to  $l$ . Now draw a perpendicular to  $\overline{XY}$  at Y. (use ruler and compasses).
- Q8. Draw the perpendicular bisector of  $\overline{XY}$  whose length is 10.2 cm.
- (a) Take any point P on the bisector drawn. Examine whether  $PX = PY$ .
  - (b) If M is the mid point of  $\overline{XY}$ , what can you say about the length MX and MY?
- Q9. Draw a line segment of length 12.8 cm. Using compasses; divide it into four equal parts. Verify by actual measurement.
- Q10. Draw a circle with center C and radius 3.4 cm. Draw any chord  $\overline{AB}$ . Construct the perpendicular bisector of AB and examine if it passes through C.

- Q11. Draw a circle of radius 4 cm. Draw any two of its chords. Construct the perpendicular bisectors of these chords. Where do they meet?
- Q12. Draw a linear pair of angles. Bisect each of the two angles. Verify that the two bisecting rays are perpendicular to each other.
- Q13. Draw a pair of vertically opposite angles. Bisect each of the two angles. Verify that the two bisecting rays are in the same line.
- Q14. How will you construct a  $150^\circ$  angle?
- Q15. Draw an angle of measure  $153^\circ$  and divide it into four equal parts.
- Q16. Construct with ruler and compasses angles of following measures:
- (a)  $30^\circ$
  - (b)  $120^\circ$
  - (c)  $45^\circ$
  - (d)  $135^\circ$