Transweb Educational Services Pvt Ltd
B -147, Sector -6 Noida, UP - 201301,
www.askiitians.com
Email: info@askiitians.com
Tel: 1800-2000-838

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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 com-passes).

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 XY?

Q9. Draw a line segment of length 12.8 cm. Using compasses; divide it into four equal parts. Verity 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.

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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^o angle?

Q15. Draw an angle of measure 153^o and divide it into four equal parts.

Q16. Construct with ruler and compasses angles of following measures:

(a) 30^o
(b) 120^o
(c) 45^o
(d) 135^o