

Chapter – 14

Practical geometry

Worksheet – 3

1. If radius of a circle is 7.5 cm, then its diameter is –
  - a. 14 cm
  - b. 15 cm
  - c. 16 cm
  - d. 17 cm
2. To construct an angle  $77\frac{1}{2}^\circ$ , we can bisect an angle of \_\_\_\_\_.
  - a.  $145^\circ$
  - b.  $155^\circ$
  - c.  $160^\circ$
  - d.  $165^\circ$
3. If the radius of a circle is 6.67 cm, then the diameter of the circle is \_\_\_\_\_.
  - a. 14.42 cm
  - b. 13.34 cm
  - c. 15.8 cm
  - d. 16.2 cm
4. The radii of two concentric circles are 3.42 cm and 5.14 cm respectively, then what is the distance between the two circles?
  - a. 1.82 cm
  - b. 1.72 cm
  - c. 1.54 cm
  - d. 2.63 cm
5. If line segment  $AB = 4.6$  cm is added to line segment  $CD = 2.6$  cm by joining B to C, then what will be the length of the joined line segment AD?
  - a. 8.4 cm
  - b. 7.2 cm
  - c. 7 cm
  - d. 8.1 cm
6. If  $\angle ABC = 160^\circ$  is bisected twice, then each angle such formed will be equal to \_\_\_\_\_?
  - a.  $50^\circ$
  - b.  $60^\circ$

- c.  $40^\circ$   
 d.  $20^\circ$
7. An angle of  $35^\circ$  can be made by dividing angle of  $105^\circ$  into \_\_\_\_\_ equal parts.
- a. One  
 b. Two  
 c. Three  
 d. Four
8. Sum of angles  $\angle ABC$ ,  $\angle BCD$  and  $\angle CDE$  measuring  $37\frac{1}{2}^\circ$ ,  $44\frac{1}{2}^\circ$  and  $53\frac{1}{2}^\circ$  respectively is \_\_\_\_\_
- a.  $130^\circ$   
 b.  $135\frac{1}{2}^\circ$   
 c.  $147\frac{1}{2}^\circ$   
 d.  $125\frac{1}{2}^\circ$
9. Match the column:

Column A	Column B
a. Diameter	i. Region bounded by a chord and arc of circumference.
b. Segment of a circle	ii. Biggest chord in the circle
c. Sector of circle	iii. Has a pair of pointers.
d. Divider	iv. Region bounded by two radii and arc of circumference.

10. State true or false:
- a. Sum of two acute angles always make a right angle.  
 b. Trisecting a right angle gives three angles measuring  $30^\circ$  each.  
 c. Bisecting a straight angles gives two angles measuring  $60^\circ$  each.  
 d. A circle can have more than one center point.
11. Draw a line 'L' and a point B on it. Through B, draw a line segment  $\overline{BC}$  such that angle between  $\overline{BC}$  and 'L' is  $45^\circ$ ?
12. Draw a chord  $CD = 3$  cm in a circle of radius = 5 cm and center O. Draw a perpendicular from the midpoint of CD to the center O?

13. Construct two circles with radius 5 cm and 3 cm respectively and in a way in which the two circles touch each other only at a single point. Connect the centers of the two circles through a line segment and measure its value?
14. Construct a circle with radius 3 cm and draw a radius line joining the center to the circumference. Draw a chord parallel to this radius line measuring 4.5 cm. Find the perpendicular distance between the radius line and the chord?
15. Construct a circle with 5 cm radius. Mark a point A anywhere on the circumference of the circle. Draw two chords from point A such that the angle between them is  $90^\circ$ .
16. Construct a circle with 4.5 cm radius. Draw two parallel chords of equal length measuring 1.5 cm. Measure the two angles made by the two chords at the center and check whether they are equal or not?
17. Draw a circle of radius 3.5 cm. Draw two chords in the circle such that they do not intersect each other. Draw two perpendicular bisectors of these chords and find out at which point do they meet?
18. Draw any angle with vertex Q. Take a point P on one arm and B on another such that  $QP = QR$ . Draw the perpendicular bisector of QP and QR. Let them meet at S. Is  $PS = RS$ ?
19. Draw an angle measuring  $151^\circ$  and construct its bisector?
20. Draw an  $\angle ABC = 165^\circ$  and make two rays inside it taking B as centre such that they trisect the  $\angle ABC$ ?