

Important Questions for CBSE Class 6 Maths Chapter 14 – Practical Geometry

Ch-14 Practical Geometry

- Angles of set squares are 45, 90 and _____.
 - 60
 - 75
 - 30
 - 90
- A _____ is the longest chord of a circle.
 - diameter
 - radius
 - None of these
 - chord
- If the radius of a circle is 8.5 cm, then the diameter of the circle is _____.
 - None of these
 - 17 cm
 - 12 cm
 - 8.5 cm
- If the radius of a circle is 3 cm, then the diameter of the circle is _____.
 - 1.5 cm
 - None of these
 - 6 cm
 - 3 cm
- If the radius of a circle is 5.5 cm, then the diameter of the circle is _____.
 - 11 cm
 - 5.5 cm
 - 12 cm
 - None of these

6. Match the following:

| Column A | Column B |
|---|----------------------------|
| (a) The line which divides a line segment into two equal halves and perpendicular to it is called | (p) perpendicular lines |
| (b) The line which divides an angle into two equal angles is called | (q) parallel lines |
| (c) The lines which intersect each other at 90° are called | (r) perpendicular bisector |
| (d) Two lines which are parallel to the same line are called | (s) angle bisector |

7. Fill in the blanks:

- The image of points A and B in the line l are P and Q respectively then $\overline{PQ} = \overline{PQ}$.
- To bisect a line segment of length 5cm, the opening of the compass should be more than half of _____.
- If an angle of measure 90° is bisected twice the angle so obtained measures _____.
- In an isosceles $\triangle PQR$, the bisector of $\angle Q$ and $\angle R$ meet at O. If $\angle QOR = 140^\circ$, then $\angle P =$ _____.

8. State whether the following statements are true or false:

- Two line segments are compared in terms of their lengths.
- When a ray makes one complete rotation, the measure of angle formed is 90° .
- With the help of compasses we can draw 80° .
- To construct an angle of 75° , we can bisect 150° .
- If an angle of 110° is bisected, find the measure of each angle formed.
- Draw two line segments which are perpendicular to each other using set squares.
- Construct an angle of 60° using compass and ruler.
- Construct \overline{PQ} of length 6cm. From this cut off \overline{PR} of length \overline{PR} of length 4.5cm. Measure \overline{QR} .
- Draw any circle and mark points A, B and C such that:
 - A is on the circle.
 - B is the interior of the circle.
 - C is the exterior of the circle.
- With \overline{PQ} of length 6.1cm as diameter draw a circle.

15. Draw a circle with centre C and radius 3.4cm. Draw any chord \overline{AB} . Construct the perpendicular bisector of \overline{AB} and examine, if it passes through C.

Answer

1.

b. (b) 75

Explanation: set squares come in two forms, both right triangles, it has 90-45-90 degree angles. Therefore the third angle here will be 90 degree

2.

a. diameter

Explanation: A diameter joins two points on the circle and so it is a chord. The diameter also passes through the centre of the circle and is the longest chord of the circle.

3.

b. 17 cm

Explanation: Diameter is twice the radius.

$$\text{Diameter} = \text{radius} \times 2 = 8.5 \times 2 = 17 \text{ cm}$$

4.

c. 6 cm

Explanation: Diameter is twice the radius.

$$\text{Diameter} = \text{radius} \times 2 = 3 \times 2 = 6 \text{ cm}$$

5.

a. 11 cm

Explanation: Diameter is twice the radius.

$$\text{Diameter} = \text{radius} \times 2 = 5.5 \times 2 = 11 \text{ cm}$$

6.

1. $\rightarrow\rightarrow r$

2. $\rightarrow\rightarrow s$

3. $\rightarrow\rightarrow p$

4. $\rightarrow\rightarrow q$

7.

1. \overline{AB}

2. 5cm

3. $2212^\circ 2212^\circ$

4. 100°

8.

1. True

2. False

3. False

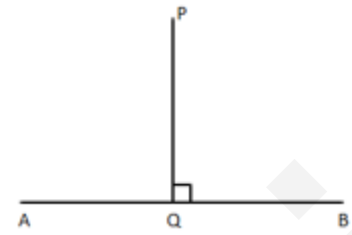
4. True

9. If an angle of 110° is bisected (divided into two equal parts), then each angle would be $110^\circ \div 2 = 55^\circ$ $110^\circ \div 2 = 55^\circ$.

10.

11. Steps of Construction:

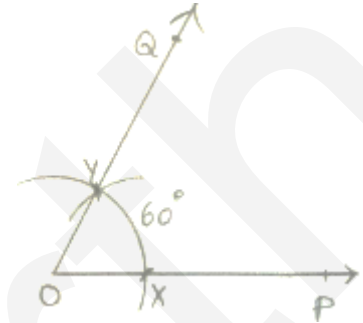
1. Draw a ray $OP \rightarrow$ and $OP \rightarrow$.
 2. With 'O' as centre and any radius, draw an arc. Cutting $OP \rightarrow$ and $OP \rightarrow$ at x.
 3. With x as centre and the same radius, draw another arc intersecting the first arc at y
 4. Join O, Y and produce it to Q.
- Hence, $\angle POQ = 60^\circ$ $\angle POQ = 60^\circ$ is the required angle.



12.

steps:-

1. Place the zero mark of the ruler at 'P'.
2. Mark a point 'Q' at a distance of 6cm from 'P'.
3. Again mark a point 'R' at a distance of 4.5cm from 'P'.
4. Hence by measuring $QR = QR = 6 - 4.5 = 1.5\text{cm}$.

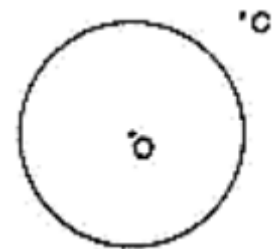
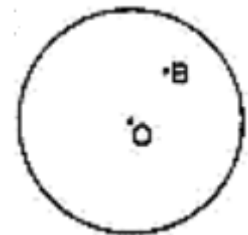
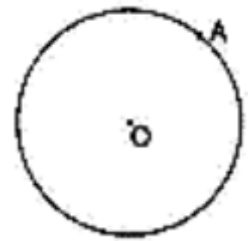


13.

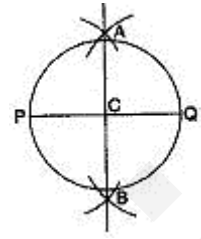
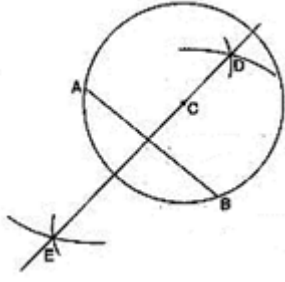
- 1.
- 2.
- 3.

14.

1. Draw a line segment PQ of length 6.1cm.
2. With P as centre, using compasses, draw an arc. The radius of this arc should be more than half of the length of PQ .
3. With the same radius and with Q as centre, draw another arc using compasses. Let it cut the previous arcs at A and B.
4. Join AB. It cuts PQ at C. Then AB is the perpendicular bisector of the line segment PQ .
5. Place the pointer of the compasses at C and open the pencil upto P.
6. Turn the compasses slowly to draw the circle.



15.



1. Draw a point with a sharp pencil and mark it as C.
2. Open the compasses for the required radius 3.4cm, by putting the pointer on 0 and opening the pencil upto 3.4cm.
3. Place the pointer of the compasses at C.
4. Turn the compasses slowly to draw the circle.
5. Draw any chord \overline{AB} of this circle.
6. With A as centre, using compasses, draw an arc. The radius of this arc should be more than half of the length of \overline{AB} .
7. With the same radius and with B as centre, draw another arc using compasses. Let it cut the previous arcs at D and E.
8. Join \overline{DE} . Then \overline{DE} is the perpendicular bisector of the line segment \overline{AB} . On examining, we find that it passes through C.