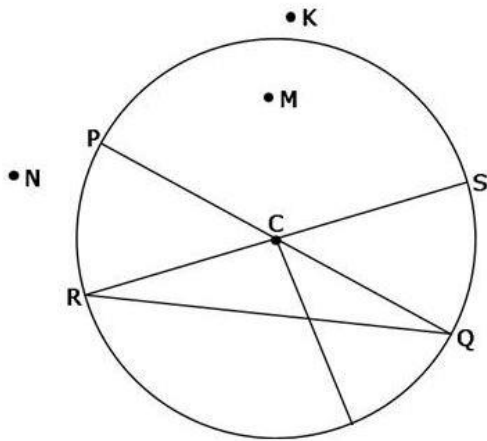


# Circle

## Exercise 90:

### Solution 1:



- Centre of the circle: Point C

Diameters of the circle: Seg PQ and Seg RS

Chord of the circle: Seg RQ

- Points in the interior of the circle: Points C and M.
- Points in the exterior of the circle: Points K and N.
- Points on the circle: Points P, R, Q and S.

## Exercise 91:

### Solution 1:

1. The two segments of the circle made by the diameter are called semicircular region.
2. The measure of an angle in a semicircular region is 90 degrees.
3. All the points on the circle and all points in the interior of the circle together form the circular region.

### Solution 2:

- False.

Correct statement: An angle in a semicircular region is a right angle.

- False.

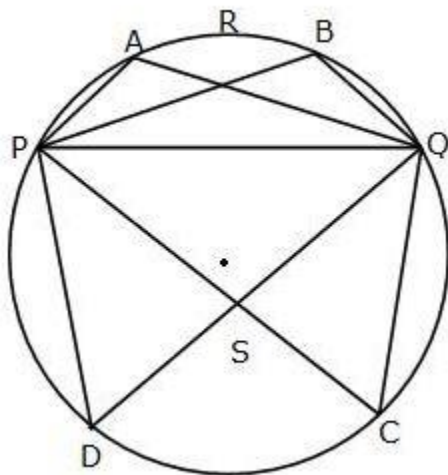
Correct statement: The angle in a minor segment of a circle is an obtuse angle.

- False.

Correct statement: The angle in a major segment of a circle is an acute angle.

- True.

**Solution 3:**



- The angles in the minor segment are  $\angle PAQ$  and  $\angle PBQ$ .
- The angles in the major segment are  $\angle PDQ$  and  $\angle PCQ$ .
- The pairs of angles in the minor segment PRQ are  $\angle PAQ$  and  $\angle PBQ$  and the pairs of angles in the major segment are  $\angle PDQ$  and  $\angle PCQ$ .

**Solution 4:**

- Seg SK is the diameter of the given circle, and hence divides the circle into two semicircular regions.

Now, an angle in a semicircular region is a right angle.

Hence,  $m\angle STK = 90^\circ$

- $\angle SMK$  also is an angle in the semicircular region.

Hence,  $m\angle SMK = 90^\circ$

**Solution 5:**

$\angle XYZ$  and  $\angle XPZ$  are the angles in the same segment and angles in the same segment are congruent.

Hence  $\angle XYZ$  and  $\angle XPZ$  have equal measures.

$$\therefore m\angle XYZ = m\angle XPZ = 100^\circ$$

**Solution 6:**

$\angle XYZ$  and  $\angle XPZ$  are the angles in the same segment and angles in the same segment are congruent.

Hence  $\angle XYZ$  and  $\angle XPZ$  have equal measures.

$$\therefore m\angle XYZ = m\angle XPZ = 100^\circ$$