


**Circle:**

- \* The set of all points in a plane at a given distance from a given point (the center).
- \* Usually named by the center point, using a single letter.
- \* Symbol:  $\odot$

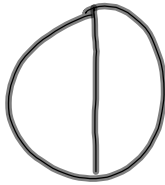
**Radius:**

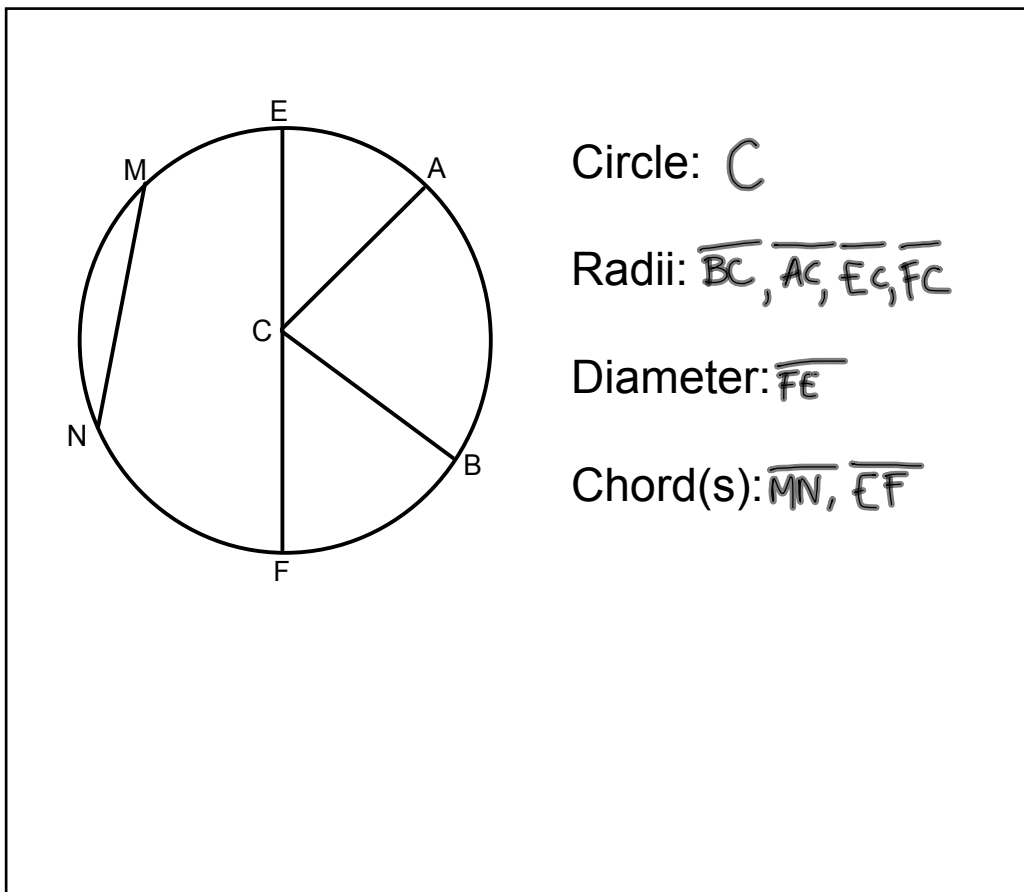
- \* A segment that goes from the center to any point on the circle. 
- \* Half the diameter.

**Chord:**

- \* A segment that has its endpoints on the circle. 

**Diameter:**

- \* A segment that goes through the center point and connects two points on the circle. 
- \* A chord of the circle.
- \* Always two times the radius.  $(2r)$



**Circumference:**

- \* The distance around the circle.
- \* Usually represented by  $C$ .
- \*  $C = 2\pi r$  or  $C = d\pi$
- \* If exact Circumference is asked for,  $\pi$  needs to be in your answer.

pi:

\* The ratio  $\frac{C}{d}$

\* It is an irrational number.

\* Can use  $\frac{22}{7}$  as an approximation.

10-1 Examples

For examples 1 - 5, refer to the circle.

1. Name the circle.

$\odot L$

2. Name a radius.

$\overline{WL}$   $\overline{RL}$   $\overline{TL}$

3. Name a chord.

$\overline{RT}$   $\overline{RS}$   $\overline{TS}$

4. Name a

$\overline{RT}$  diameter.

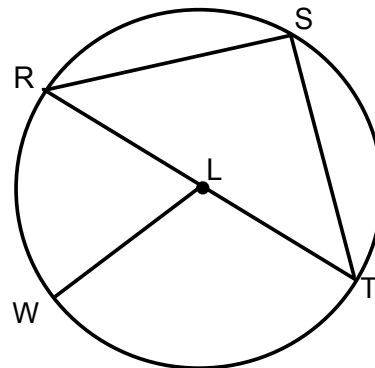
5. Name a radius

not drawn as

part of the

diameter.

$\overline{WL}$



The radius, diameter, or circumference of a circle is given. Find the missing measures to the nearest hundredth.

$$C = 2\pi r \quad C = \pi D$$

6.  $r = 7.55 \text{ mm}$

$$d = \underline{15.10 \text{ mm}}$$

$$C \approx \underline{47.44 \text{ mm}}$$

$$C = 2\pi 7.55$$

$$47.438 \approx 47.44$$

$$\begin{array}{r} 7.55 \\ \times 2 \\ \hline 15.1 \end{array}$$

7.  $C = 227.6 \text{ yd}$

$$d \approx \underline{72.44 \text{ yd}}$$

$$r \approx \underline{36.22 \text{ yd}}$$

$$\frac{227.6}{\pi} = \frac{\pi d}{\pi}$$

$$\underline{72.44}$$

$$\frac{72.44}{2}$$

8. Find the exact circumference of the circle.

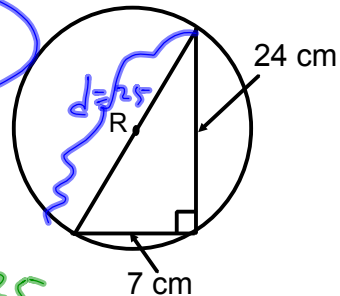
$$C = 2\pi r \text{ or } \underline{C = \pi d}$$

$$d^2 = 7^2 + 24^2$$

$$d^2 = 49 + 576$$

$$\sqrt{d^2} = \sqrt{625}$$

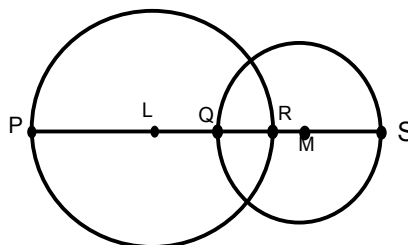
$$d = 25$$



$$C = \pi \cdot 25$$

$$\underline{C = 25\pi \text{ cm}}$$

The diameters of  $\odot L$  and  $\odot M$  are 20 and 13 units, respectively. Find each measure if  $QR = 4$ .



9. LQ

10. RM