

Math Practice Sheets

Shapes and Solids Part I

Student Name



Examples

Practice Questions

Extra Challenge Unit

**Unit
17.1**

Circles and Circumference

Example

A closed plane figure made up of all points that are same distance from a given point is called a **circle**. The fixed point is called the **center**. In the figure, O is the center.

Any line segment that connects the center to a point on the circle is called a **radius**. In the figure, \overline{OR} is a radius.

Any line segment that connects the two points on a circle and passes through center is called a **diameter**. In the figure, \overline{AP} is a diameter of the circle. It is always twice the radius. i.e. $d = 2r$

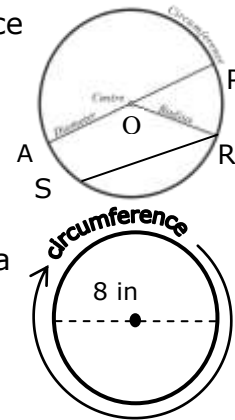
Any line segment that connects the two points on a circle is called a **chord**. In the figure, \overline{SR} is a chord.

Any angle whose vertex is at the center of the circle is called a **central angle**. So, $\angle POR$ is central angle.

The total distance around the circle is **circumference**.

The circumference(C) = $2 \times \pi \times r$ or $\pi \times d$

Where d = diameter, r = radius, and $\pi = 3.14$



In the figure, $d = 8$ in
The circumference (C)
= $\pi \times d = 3.14 \times 8$ in
= 25.12 in
 $\therefore C = 25.12$ inch

Exercise

- Identify the name of each part of the given circles.

\overline{OM}	=	
\overline{ON}	=	
\overline{NM}	=	
Point O	=	
\overline{AB}	=	
MABNPM	=	
$\angle PON$	=	

- What are the diameters of the following circles?

<p>a)</p>	<p>b)</p>
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