GEOMETRY

WEEK 3

NAME (First and Last):

Teacher’s Name & Period:

DAY 1

A radius of a circle (plural radii is a line segment from the center to a point on a circle. $CD, CE,$ and $CF$ are radii of circle $c$.

A chord of a circle is a segment with endpoint on the circle. $AB$ and $DE$ are chords of a circle $c$.

A diameter of a circle is a chord that passes through the center of a circle. $DE$ is a diameter of a circle.

A circle is the set of all points in a plane that are the same distance from a given point called the center of a circle. The center of the circle is $C$.

IDENTIFY THE PARTS OF THE CIRCLES

Here is an example:

Center $=$ ______

Radius $=$ ______

Diameter $=$ ______

Notice there are three radii listed. All are a line segment from the center to a point on a circle.

You try:

Center $=$ ______

Radius $=$ ______

Diameter $=$ ______

MORE PARTS OF A CIRCLE

Secant: a line that intersects a circle in two points.

Tangent: a line that intersects a circle in exactly one point.

Point of tangency: The point where the tangent line touches the circle.

Here’s an example:

Center $=$ ______

Radius $=$ ______

Diameter $=$ ______

Chord $=$ ______

Tangent $=$ ______

You try:

Center $=$ ______

Radius $=$ ______

Diameter $=$ ______

Chord $=$ ______

Tangent $=$ ______

Point of tangency $=$ ______
FOR THE “YOU TRY” PROBLEMS THIS IS WHAT YOU SHOULD HAVE GOTTEN

Now that we have done practice problems, now try matching them by drawing a line that connects the word with the image.

MATCHING

RADIUS

CHORD

TANGENT LINE

DIAMETER

CENTER

SECANT

Practice Problems (graded examples)

<table>
<thead>
<tr>
<th>Identify the parts of each circle</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
</tr>
<tr>
<td><img src="image1.png" alt="Circle 1" /></td>
</tr>
<tr>
<td>Center = _______</td>
</tr>
<tr>
<td>Radius = _______</td>
</tr>
<tr>
<td>Diameter = _______</td>
</tr>
</tbody>
</table>

| 2.                               |
| ![Circle 2](image2.png)          |
| Center = _______                |
| Radius = _______                |
| Diameter = _______              |

| 3.                               |
| ![Circle 3](image3.png)          |
| Center = _______                |
| Radius = _______                |
| Diameter = _______              |
Circumference -
is the distance around a circle. The formula to determine the circumference of a circle is

\[ C = 2\pi r \text{ or } \pi d \]

when using \( \pi \) these examples use the approximation of 3.14 and remember \( r \) represent the radius and \( d \) represent the diameter

<table>
<thead>
<tr>
<th>Example: Find the circumference of the circle</th>
<th>Using ( C = 2\pi r )</th>
<th>Using ( C = \pi d )</th>
</tr>
</thead>
</table>
| \[
\begin{gathered}
2 (\pi) (r) \\
C = 2(3.14)(3) \quad \text{Multiply all three numbers}
\end{gathered}
\] | \[
\begin{gathered}
(\pi) (d) \\
C = (3.14)(6) \quad \text{remember the radius is half the diameter so the diameter is 3+3}
\end{gathered}
\] |
| \[
\begin{gathered}
C = 2(3.14)(3) \\
C = 18.84 \text{ in.}
\end{gathered}
\] | \[
\begin{gathered}
C = (3.14)(6) \\
C = 18.84 \text{ in}
\end{gathered}
\] |

You try: Find the circumference and round to the nearest tenth.

AREA -
The area of a circle is the number of square units inside that circle. The formula to determine the area of a circle is \( A = \pi r^2 \)

Remember when using \( \pi \) for these examples use the approximation 3.14 and remember \( r^2 \) is \( r \times r \)

| Example: Find the area of the circle | You must have the radius to find the area. The diameter is 14 inches. To find the radius find half of 14. \[
\begin{gathered}
r = \frac{d}{2} \\
r = \frac{14}{2} = 7
\end{gathered}
\] | \[
\begin{align*}
A &= \pi r^2 \\
A &= (3.14)(7)^2 \\
A &= (3.14)(49) \\
A &= 153.86 \text{ in}^2
\end{align*}
\] |
|----------------------------------|---------------------------------|---------------------------------|
| \[
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\end{align*}
\] |
### You try: Find the area and round to the nearest tenth.

#### CIRCUMFERENCE EXAMPLES

| Circumference | 69.1 ft | 15.7 m |

| Circumference | 69.1 ft | 15.7 m |

#### AREA EXAMPLES

| Area | $452.4 \text{ mi}^2$ | $314.2 \text{ m}^2$ |

### Practice problems (graded examples).

- 1. Find the circumference and round to the nearest tenth.
- 2. Find the circumference and round to the nearest tenth.
- 3. Find the circumference and round to the nearest tenth.
- 4. Find the circumference and round to the nearest tenth.
- 5. Find the area and round to the nearest tenth.
- 6. Find the area and round to the nearest tenth.
- 7. Find the area and round to the nearest tenth.
- 8. Find the area and round to the nearest tenth.

Remember area is in square units.

Don’t forget to include your units.
**Volume of a Cylinder day 3**

**Volume-** The amount of 3-dimensional space something takes up.

**Formula for volume of a Cylinder**

\[ V = \pi r^2 h \]

Example: Find the volume of the cylinder and round to the nearest tenth.

\[ V = \pi r^2 h \]
\[ V = (3.14)(6)^2(11) \]
\[ V = (3.14)(36)(11) \]
\[ V = 1243.44 \text{ m}^3 \]

Volume is in cubic units

You try: Find the volume of the cylinder and round to the nearest tenth.

\[ V = \pi r^2 h \]
\[ V = (3.14)(6)^2(11) \]
\[ V = (3.14)(36)(11) \]
\[ V = 1243.44 \text{ m}^3 \]

Volume is in cubic units

**FOR THE "YOU TRY" PROBLEMS THIS IS WHAT YOU SHOULD HAVE GOTTEN**

<table>
<thead>
<tr>
<th>Cylinder Dimensions</th>
<th>Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>653.12 in(^3)</td>
<td></td>
</tr>
<tr>
<td>706.5 cm(^3)</td>
<td></td>
</tr>
</tbody>
</table>
Practice problems (graded examples).

You try: Find the volume of the cylinder and round to the nearest tenth.

***Don’t forget to find the radius first

<table>
<thead>
<tr>
<th>1.</th>
<th>2.</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="Cylinder 1" /></td>
<td><img src="image2" alt="Cylinder 2" /></td>
</tr>
<tr>
<td>653.12in³</td>
<td>706.5cm³</td>
</tr>
</tbody>
</table>

Don’t forget to include your units

Find the volume of the cylinder and round to the nearest tenth.

\[ V = \pi r^2 h \]

<table>
<thead>
<tr>
<th>3.</th>
<th>4.</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image3" alt="Cylinder 3" /></td>
<td><img src="image4" alt="Cylinder 4" /></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>5.</th>
<th>6.</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image5" alt="Cylinder 5" /></td>
<td><img src="image6" alt="Cylinder 6" /></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>7.</th>
<th>8.</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image7" alt="Cylinder 7" /></td>
<td><img src="image8" alt="Cylinder 8" /></td>
</tr>
</tbody>
</table>