$\qquad$
Sector Area
The formula for the area of a circle is: $A=\pi r^{2}$. Determine the area of each circle.

| EXAMPLE |  |  |
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Determine the area of each circle in terms of pi (leave " $\pi$ " - do not use 3.14).


A sector is a part of the circle that is created by two radii. It looks like a slice cut out of the circle. The area of the sector represents a fractional part of the total area of the circle. Since the total degree measure of a circle is $360^{\circ}$, the portion of a circle created by a sector is shown by the fraction $\frac{\text { angle }}{360}$.

$$
\text { Sector Area }=\left(\frac{\text { angle }}{360}\right) \pi r^{2}
$$

Determine the area of the sector in terms of pi.

EXAMPLE

## $288^{\circ}$


Sector Area $=\left(\frac{288}{360}\right) \pi(3)^{2}$
Reduce the fraction:

$$
\begin{gathered}
\frac{288 \div 4}{360 \div 4}=\frac{72 \div 9}{90 \div 9}=\frac{8 \div 2}{10 \div 2}=\frac{4}{5} \\
A=\left(\frac{4}{5}\right) \pi(3)^{2} \\
A=\left(\frac{4}{5}\right) 9 \pi=\left(\frac{4}{5}\right)\left(\frac{9}{1}\right) \pi \\
A=\frac{36}{5} \pi \text { or } 7.2 \pi
\end{gathered}
$$

10. 



| 11. | 12. | 13. |  |
| :---: | :---: | :---: | :---: |
| 14. | 15. | 16. |  |

