$\theta = 1 \text{ rad}$

1.2 radians (I)

3 radians (II)

$\pi = 180^\circ$
\[
\frac{S}{r} = \frac{\theta r}{r} = \theta \quad \text{EX} 3 \quad \frac{18}{2.15 \text{rad}} = 8 \quad s = 18 \text{cm} \quad r = 8 \text{cm}
\]
\[ C = \pi d \]
\[ C = 2\pi r \]
\[ C = 2\pi r \cdot r \Rightarrow s = \theta \cdot r \]
\[ s \]
360° = 2π
180° = π
90° = \frac{π}{2}
45° = \frac{π}{4}
30° = \frac{π}{6}
60° = \frac{π}{3}
90° = π/2
15° = \frac{π}{12}
\[ \frac{\pi}{180^\circ} \text{ d to r} \]

\[ \frac{180^\circ}{\pi} \text{ r to d} \]

\[ 1 \text{ ft} = \frac{12 \text{ in}}{180^\circ} \]

\[ \frac{270^\circ}{\pi} = \frac{270^\circ}{180^\circ} \cdot \frac{3\pi}{2} \]

\[ \approx 35.4 \]
9 \[ \theta = \frac{s}{r} \text{ or } s = r \theta \]

\[ s = 5 \text{ cm} \]
\[ r = 5 \text{ cm} \]

\[ \theta = \frac{s}{r} = \frac{5 \text{ cm}}{5 \text{ cm}} = 1 \text{ rad} \]
20-24

$\Theta = \frac{\pi}{6}$

*add $2\pi$ 2 times for (+)

\[
\frac{\pi}{6} + 2\pi \Rightarrow \frac{\pi}{6} + \frac{12\pi}{6} = \frac{13\pi}{6}
\]

\[
\frac{\pi}{6} + 2\pi + 2\pi \Rightarrow \frac{\pi}{6} + \frac{12\pi}{6} + \frac{24\pi}{6} = \frac{37\pi}{6}
\]

*sub $2\pi$ 2 times

\[
\frac{\pi}{6} - 2\pi \Rightarrow \frac{\pi}{6} - \frac{12\pi}{6} = \frac{-11\pi}{6}
\]
\[ \theta = 27^\circ \]

\[
\frac{27^\circ}{1^\circ} \cdot \frac{\pi}{180} = \frac{27\pi}{180} = \frac{3\pi}{20} = \frac{47.12}{\text{ten thousandths}}
\]