

Tonight's Homework:
Worksheet #11.2

Adv. Alg.-Trig.
Homework #11.1

For #'s 19-21 change
the degrees/minutes to
a decimal...

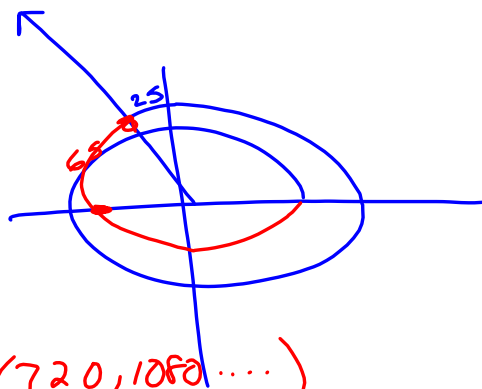
Leave Radians as a fraction...

- 1) I 2) IV 3) III 4) I 5) III 6) III 7) IV
- 8) Yes 9) No 10) No 11) Yes
- 12) Yes 13) Yes 14) Yes 15) Yes
- 16) Yes

Feb 10 - 12:15 PM

$$\begin{array}{r} 12 \overline{) 1475} \\ 475 \\ + 245 \\ \hline 720 \end{array}$$

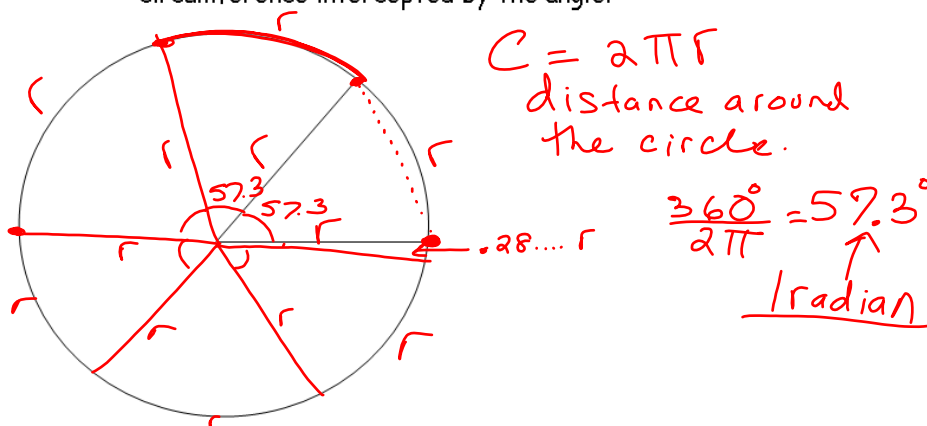
Sum (abs. value)
is a mult. of 360 (720, 1080, ...)
then Yes



Radian Measure

Oct 2 - 6:27 PM

Radian measure is the length of the segment of the circumference intercepted by the angle.



Radian of 360° = circumference of the circle.

$$360^\circ = \cancel{2\pi} \text{ or } \cancel{\pi d} \text{ radians}$$

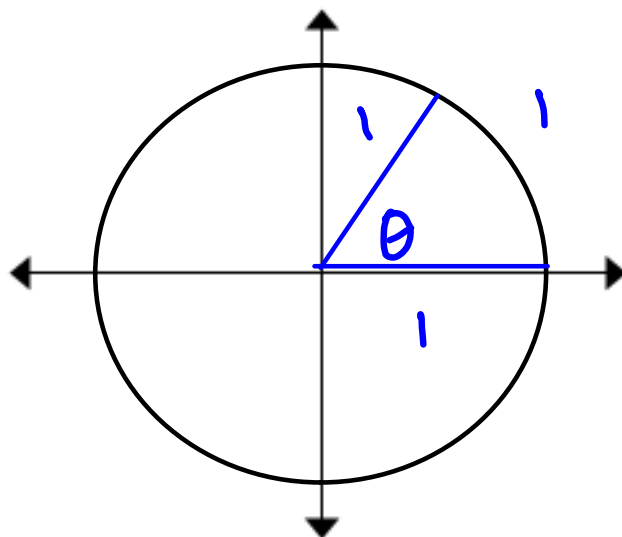
2π radians

$$180^\circ = \cancel{\pi} \text{ radians}$$

π radians

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1 Radian = ? °



Oct 2 - 6:23 PM

3 ft = ___ inches?

7.4 miles = ___ Feet?

Feb 13-2:47 PM

Rules for Converting From Radians to Degree

- Multiply Radian Measure by $\frac{180^\circ}{\pi}$

Examples:

1) 6 radians $\rightarrow$ _____ $^\circ$ (hint: use the π key on your calculator)

radian $\rightarrow$ degree

$$6 \cdot \frac{180}{\pi} = 343.8$$

2) $\frac{4\pi}{3}$ radians $\rightarrow$ _____ $^\circ$

radian $\rightarrow$ degree

$$\frac{4\pi}{3} \cdot \frac{180}{\pi} = 240^\circ$$

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Rules for Converting From Degree to Radians

- Multiply Degree Measure by $\frac{\pi}{180^\circ}$

Examples:

3) $50^\circ \rightarrow$ _____radians

degree $\rightarrow$ radians

$$50 \cdot \frac{\pi}{180} = \frac{5\pi}{18}$$

4) $120^\circ \rightarrow$ _____radians

degree $\rightarrow$ radians

$$120 \cdot \frac{\pi}{180} = \frac{2\pi}{3}$$

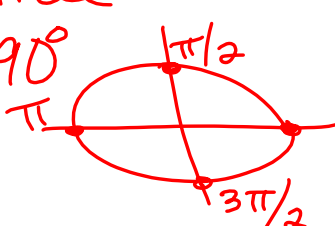
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Try Some Examples

Convert to Degrees:

Unit Circle

① $\frac{\pi}{2} = 90^\circ$



2) $\frac{\pi}{10} = \frac{180^\circ}{10} = 18^\circ$

3) $\frac{9\pi}{5} = \frac{9(180)}{5} = 9 \cdot 36 = 324$

4) 3 Radians $3 \cdot \frac{180}{\pi} = 171.9^\circ$

5) 1.25 Radians

$$1.25 \cdot \frac{180}{\pi} = 71.6^\circ$$

6) .981 Radians

$$.981 \cdot \frac{180}{\pi} = 56.2^\circ$$

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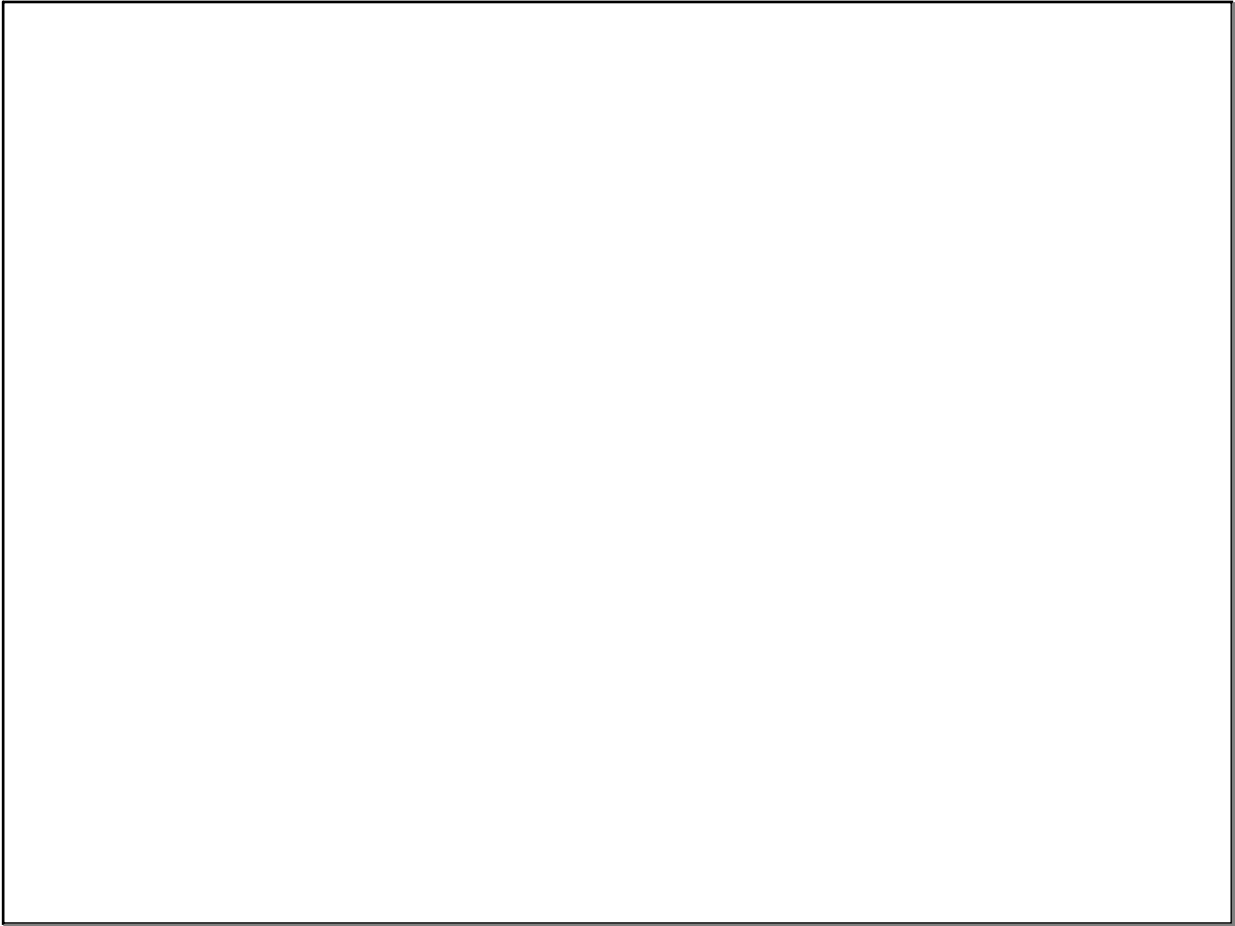
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Feb 9-9:19 AM



Feb 11-3:36 PM