

Name: _____

Date: _____

UNIT 5 • TRIGONOMETRIC FUNCTIONS

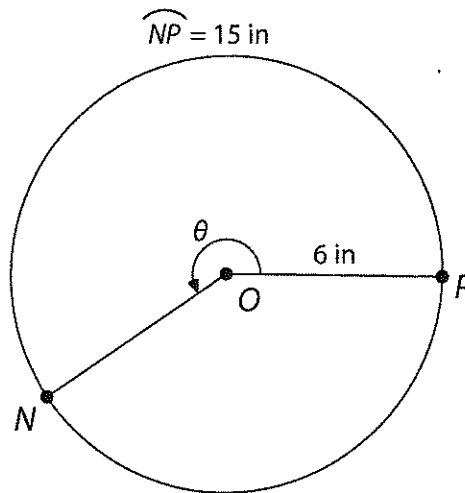
Lesson 1: Radians and the Unit Circle

Assessment

Progress Assessment

Circle the letter of the best answer.

1. What is the measure of the angle shown?



- a. 0.4 radian
b. 2.5 radians
- c. 45 radians
d. 90 radians
2. Convert 125° to radians.
- a. $\frac{25\pi}{36}$ radians
b. $\frac{25\pi}{72}$ radians
- c. $\frac{36\pi}{25}$ radians
d. $\frac{72\pi}{25}$ radians
3. Convert $\frac{9\pi}{5}$ radians to degrees.
- a. 100°
b. 162°
- c. 324°
d. 648°
4. If $\theta = \frac{13\pi}{11}$ radians, what is the measure of its reference angle?
- a. $\frac{\pi}{11}$ radians
b. $\frac{2\pi}{11}$ radians
- c. $\frac{8\pi}{11}$ radians
d. π radians

continued

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10. If $\sin\theta = -\frac{4}{5}$, and the terminal side of the angle is in Quadrant III, what is $\cot\theta$?

a. $-\frac{4}{3}$

c. $\frac{3}{4}$

b. $-\frac{3}{4}$

d. $\frac{4}{3}$

Use what you have learned about radians and the unit circle to complete all parts of the following problem.

11. Alison is trying to boost her endurance by running interval sprints around a circular track.

After 1 minute, she has run $\frac{3}{8}$ of the way around the track.

a. What is the measure of the angle created by her 1-minute run? State your answer in radians.

b. At what exact point would the angle determined in part a intersect the unit circle?

c. What is the tangent of the angle determined in part a?