

Name _____

2-9

Lesson Master

Questions on SPUR Objectives
See Student Edition pages 142–145 for objectives.

SKILLS

Objective B

In 1 and 2, identify four points (x, y) on the graph of the equation. Include at least one negative value of x and at least one value of x greater than 2π .

1. $y = \sin x$ _____

2. $y = \sec x$ _____

In 3 and 4, name at least three values of θ that satisfy the given equation. Express your answers in radians.

3. $\tan \theta = \sqrt{3}$ _____ 4. $\csc \theta = -2$ _____

In 5 and 6, a false statement is given. a. Provide a counterexample to show that the statement is false. b. Change the statement so that it is true.

5. $\sin x = \sin(x + \pi k)$, for all integers k and real numbers x .

- a. _____

- b. _____

6. $\tan x = \tan(x + \pi k)$, for all real numbers k and real numbers x .

- a. _____

- b. _____

PROPERTIES

Objective E

7. Describe the end behavior of the cosecant function. _____

8. What is the value of $\lim_{x \rightarrow \infty} \cos x$? Explain your answer. _____

9. a. Give equations of any horizontal asymptotes of the graph of $y = \sin x$, or say that they don't exist. _____
- b. Give equations of any horizontal asymptotes of the graph of $y = \frac{\sin x}{x^2}$, or say that they don't exist. _____