

Name _____

10-9B Lesson Master

Questions on SPUR Objectives
See Student Edition pages 724-727 for objectives.

VOCABULARY

1. Define *radian*.

True or False In 2-4, if the statement is false, rewrite the statement to make it true.

2. The range of the sine function is the set of all real numbers.

3. The graph of the sine function has x -intercepts at the even-numbered multiples of 90° .

4. The graphs of $f(\theta) = \cos \theta$ and $g(\theta) = \sin \theta$ are congruent.

SKILLS Objective A

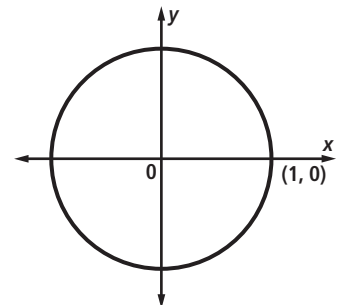
In 5-13, approximate the value to the nearest thousandth.

- | | | |
|----------------------------------|-------------------------------|--------------------------------|
| 5. $\sin \frac{5\pi}{9}$ _____ | 6. $\tan \frac{\pi}{8}$ _____ | 7. $\cos \frac{\pi}{12}$ _____ |
| 8. $\sin -\frac{4\pi}{15}$ _____ | 9. $\tan -2.3\pi$ _____ | 10. $\cos 4.6\pi$ _____ |
| 11. $\sin 3$ _____ | 12. $\tan -5$ _____ | 13. $\sin 16\pi$ _____ |

SKILLS Objective D

In 14-23, convert the radian measure to degrees. Plot a point on the unit circle at the right whose x - and y -coordinates are the cosine and sine of the angle.

- | | |
|------------------------------|----------------------------|
| 14. $\frac{\pi}{8}$ _____ | 15. 3π _____ |
| 16. $\frac{\pi}{2}$ _____ | 17. $\frac{5\pi}{6}$ _____ |
| 18. $\frac{11\pi}{12}$ _____ | 19. $-\frac{\pi}{4}$ _____ |
| 20. -4π _____ | 21. 1.5π _____ |
| 22. $\frac{8\pi}{3}$ _____ | 23. $\frac{9\pi}{8}$ _____ |

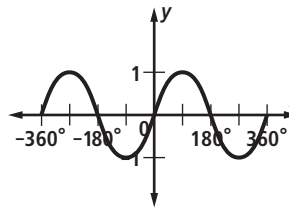


Name _____

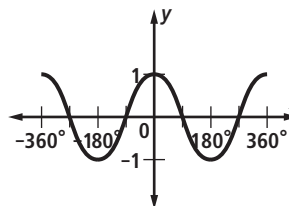
10-9B

page 2

24. At the right is a graph of the sine function, $f: x \rightarrow \sin x$ for $-360^\circ \leq x \leq 360^\circ$. If the domain were changed to $-2\pi \leq x \leq 2\pi$, what would be the coordinates of the x -intercepts?



25. At the right is a graph of the cosine function, $g: x \rightarrow \cos x$ for $-360^\circ \leq x \leq 360^\circ$. If the domain were changed to $-2\pi \leq x \leq 2\pi$, what would be the coordinates of the x -intercepts?



26. **True or False** The period of the cosine function is 360° .

27. **True or False** The period of the sine function is π .

In 28-43, give the exact value of the trigonometric function.

28. $\sin \frac{\pi}{2}$ _____

29. $\cos -\frac{\pi}{4}$ _____

30. $\tan \frac{13\pi}{6}$ _____

31. $\cos -\frac{3\pi}{4}$ _____

32. $\tan -\frac{3\pi}{4}$ _____

33. $\sin \frac{5\pi}{6}$ _____

34. $\cos \frac{\pi}{6}$ _____

35. $\sin \frac{\pi}{4}$ _____

36. $\cos \frac{\pi}{2}$ _____

37. $\sin -\frac{3\pi}{4}$ _____

38. $\tan -\frac{\pi}{4}$ _____

39. $\cos 0$ _____

40. $\sin -\frac{\pi}{3}$ _____

41. $\tan \frac{5\pi}{6}$ _____

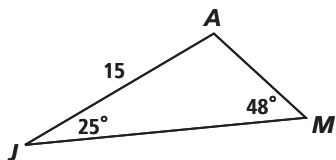
42. $\sin 3\pi$ _____

43. $\sin -\frac{3\pi}{2}$ _____

REVIEW Lesson 10-7, Objective C

In 44 and 45, use the triangle below each question and find the value to the nearest tenth.

44. $JM =$ _____



45. $DF =$ _____

