

Math III Unit Circle Worksheet

Name _____
Period _____

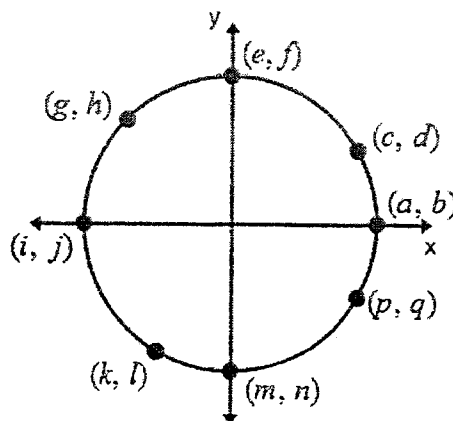
Practice Exercises I

Use the unit circle to find the exact value.

- | | | | |
|----------------------------|---------------------------|---------------------------|---------------------------|
| 1. $\cos 135^\circ$ | 2. $\tan 270^\circ$ | 3. $\sin 300^\circ$ | 4. $\cos 45^\circ$ |
| 5. $\tan 60^\circ$ | 6. $\sin 120^\circ$ | 7. $\cos 180^\circ$ | 8. $\tan 0^\circ$ |
| 9. $\sin 210^\circ$ | 10. $\cos 240^\circ$ | 11. $\tan 225^\circ$ | 12. $\sin 315^\circ$ |
| 13. $\sin \frac{11\pi}{6}$ | 14. $\cos \frac{\pi}{6}$ | 15. $\tan \frac{5\pi}{6}$ | 16. $\sin \frac{\pi}{2}$ |
| 17. $\cos \pi$ | 18. $\tan \frac{7\pi}{4}$ | 19. $\sin \frac{5\pi}{4}$ | 20. $\cos \frac{7\pi}{6}$ |
| 21. $\tan \frac{3\pi}{2}$ | 22. $\sin \frac{\pi}{4}$ | 23. $\cos \frac{2\pi}{3}$ | 24. $\tan \frac{\pi}{2}$ |

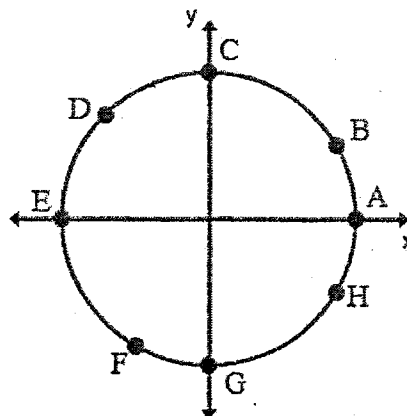
Refer to the diagram. Give the letter that could stand for the function value.

- | | |
|----------------------------|---------------------------|
| 25. $\sin 180^\circ$ | 26. $\cos 270^\circ$ |
| 27. $\cos 30^\circ$ | 28. $\sin 135^\circ$ |
| 29. $\cos 0^\circ$ | 30. $\sin 330^\circ$ |
| 31. $\sin \frac{\pi}{2}$ | 32. $\cos \frac{4\pi}{3}$ |
| 33. $\cos \frac{3\pi}{4}$ | 34. $\sin \frac{4\pi}{3}$ |
| 35. $\cos \frac{11\pi}{6}$ | 36. $\sin 2\pi$ |



For the indicated point, tell if the value for $\sin \theta$ or $\cos \theta$ is positive, negative, or neither.

- | | |
|--------------|--------------|
| 37. $\cos G$ | 38. $\sin C$ |
| 39. $\sin H$ | 40. $\cos D$ |
| 41. $\cos B$ | 42. $\sin E$ |
| 43. $\sin B$ | 44. $\sin F$ |
| 45. $\sin G$ | 46. $\cos A$ |
| 47. $\cos E$ | 48. $\cos C$ |



Practice II

Do #1-17 odd

Find all values of x , $0 \leq x < 2\pi$, that make the statement true.

1. $\sin x = -\frac{\sqrt{2}}{2}$

2. $\cos x = \frac{1}{2}$

3. $\tan x = -1$

4. $\sin x = -1$

5. $\cos x = -\frac{\sqrt{3}}{2}$

6. $\tan x = 0$

7. $\sin x = -\frac{\sqrt{3}}{2}$

8. $\cos x = \frac{\sqrt{2}}{2}$

9. $\tan x = \frac{\sqrt{3}}{3}$

10. $\sin x = 0$

11. $\cos x = -1$

12. $\tan x = 1$

13. $\sec x = -\frac{2}{\sqrt{3}}$

14. $\csc x = 2$

15. $\cot x = -1$

16. $\sec x = 1$

17. $\csc x = -1$

18. $\cot x = -\sqrt{3}$

Use technology to find all solutions in the interval $[0, 2\pi)$.

19. $\sin x = 0.33$

20. $\cos x = 0.59$

21. $\tan x = 1.515$

22. $\cos x = -0.36$

23. $\tan x = 0.43$

24. $\sin x = 0.23$

25. $\tan x = -2.4$

26. $\sin x = -0.88$

27. $\cos x = 0.17$