Using the Unit Circle

Evaluate.

1. $\sin 300°$ $-\dfrac{\sqrt{3}}{2}$

2. $\cos 240°$ $-\dfrac{1}{2}$

3. $\tan 225°$ 1

4. $\cos(-210°)$ $-\dfrac{\sqrt{3}}{2}$

5. $\sin(-45°)$ $-\dfrac{\sqrt{2}}{2}$

6. $\tan(-135°)$ 1

7. $\sin(-270°)$ 1

8. $\cos(960°)$ $-\dfrac{1}{2}$

9. $\sin(-750°)$ $-\dfrac{1}{2}$

10. $\tan(1530°)$ $-\sqrt{3}$

11. $\sin(660°)$ $-\dfrac{\sqrt{3}}{2}$

12. $\cos(-450°)$ 0

13. $\cos\dfrac{9\pi}{2}$ 0

14. $\sin\dfrac{27\pi}{4}$ $\dfrac{\sqrt{2}}{2}$

15. $\tan\left(-\dfrac{11\pi}{4}\right)$ 1

16. $\cos\left(\dfrac{-2\pi}{3}\right)$ $-\dfrac{1}{2}$

17. $\sin\left(\dfrac{-\pi}{6}\right)$ $-\dfrac{1}{2}$

18. $\sec 300°$ 2

19. $\csc 240°$ $-\dfrac{2\sqrt{3}}{3}$

20. $\cot 960°$ $\dfrac{\sqrt{3}}{3}$

21. $\sec(-750°)$ $\dfrac{2\sqrt{3}}{3}$

22. $\csc 1560°$ $\dfrac{2\sqrt{3}}{3}$

23. $\cot(-450°)$ 0

24. $\sec\left(\dfrac{27\pi}{4}\right)$ $-\sqrt{2}$

25. $\cos 180°$ -1

26. $\sin 360°$ 0

27. $\tan 90°$ UND

28. $\cot 180°$ UND

29. $\sec 720°$ 1

30. $\csc 720°$ UND

31. $\sin(-135°)$ $-\dfrac{\sqrt{2}}{2}$

32. $\cos 135°$ $-\dfrac{\sqrt{2}}{2}$

33. $\sin 150°$ $\dfrac{1}{2}$

34. $\cos 150°$ $-\dfrac{\sqrt{3}}{2}$

35. $\tan 240°$ $\sqrt{3}$

36. $\sec 315°$ $\sqrt{2}$

37. $\cot(-315°)$ ___1___

38. $\sin\left(\dfrac{13\pi}{4}\right)$ ___$\dfrac{-\sqrt{2}}{2}$___

39. $\cos\left(\dfrac{\pi}{6}\right)$ ___$\dfrac{\sqrt{3}}{2}$___

40. $\tan\left(\dfrac{7\pi}{6}\right)$ ___$\dfrac{\sqrt{3}}{3}$___

41. $\sec\left(\dfrac{14\pi}{6}\right)$ ___2___

42. $\csc\left(\dfrac{\pi}{3}\right)$ ___$\dfrac{2\sqrt{3}}{3}$___

43. $\cot\left(\dfrac{11\pi}{5}\right)$ ___$-\sqrt{3}$___

44. $\sin\left(\dfrac{23\pi}{6}\right)$ ___$-\dfrac{1}{2}$___

45. $\cos\left(\dfrac{-\pi}{2}\right)$ ___0___

46. $\tan\left(\dfrac{-5\pi}{6}\right)$ ___$\dfrac{\sqrt{3}}{3}$___

47. $\sec\left(-\dfrac{17\pi}{6}\right)$ ___$\dfrac{-2\sqrt{3}}{3}$___

48. $\csc\left(-\dfrac{3\pi}{2}\right)$ ___1___

49. $\cot\left(-\dfrac{7\pi}{6}\right)$ ___$-\sqrt{3}$___

50. $\sin(-660°)$ ___$\dfrac{\sqrt{3}}{2}$___

51. $\cos 840°$ ___$-\dfrac{1}{2}$___

52. $\tan 540°$ ___0___

53. $\sec(-780°)$ ___2___

54. $\csc 1320°$ ___$\dfrac{-2\sqrt{3}}{3}$___

Challenge Problems: Use the unit circle to find the angle measure (work backwards)

55. $\sin\theta = \dfrac{1}{2}$ _____

56. $\sin\theta = -\dfrac{1}{2}$ _____

57. $\cos\theta = \dfrac{\sqrt{2}}{2}$ _____

58. $\cos\theta = -\dfrac{\sqrt{2}}{2}$ _____

59. $\csc\theta = \dfrac{2\sqrt{3}}{3}$ _____

60. $\cot\theta = -1$ _____

61. $\sec\theta = 2$ _____

62. $\sec\theta = -2$ _____

63. $\tan\theta = 1$ _____

64. $\cot\theta = -\sqrt{3}$ _____

65. $\sin\theta = \dfrac{\sqrt{3}}{2}$ _____

66. $\sin\theta = -\dfrac{\sqrt{3}}{2}$ _____