

Name _____

Date _____

Score _____

Alg2 & Trig : Unit Circle and Winding Function

Write the ordered pair for $w(x)$ for each of the following:

1. $w(2\pi)$ _____

2. $w(9\pi)$ _____

3. $w(3\pi)$ _____

4. $w\left(\frac{7\pi}{2}\right)$ _____

5. $w\left(-\frac{7\pi}{2}\right)$ _____

6. $w\left(\frac{15\pi}{2}\right)$ _____

7. $w\left(-\frac{5\pi}{2}\right)$ _____

8. $w(-11\pi)$ _____

9. $w\left(\frac{21\pi}{2}\right)$ _____

10. $w\left(\frac{5\pi}{2}\right)$ _____

11. $w(20\pi)$ _____

12. $w(-\pi)$ _____

13. $w\left(\frac{17\pi}{2}\right)$ _____

14. $w(-16\pi)$ _____

15. $w\left(\frac{9\pi}{2}\right)$ _____

16. $w\left(-\frac{13\pi}{2}\right)$ _____

17. $w(5\pi)$ _____

18. $w(-7\pi)$ _____

19. $w\left(\frac{11\pi}{2}\right)$ _____

20. $w\left(-\frac{13\pi}{2}\right)$ _____

21. $w\left(-\frac{11\pi}{2}\right)$ _____

22. $w\left(\frac{19\pi}{6}\right)$ _____

23. $w\left(\frac{2\pi}{3}\right)$ _____

24. $w(12\pi)$ _____

25. $w\left(\frac{4\pi}{3}\right)$ _____

26. $w\left(\frac{5\pi}{3}\right)$ _____

27. $w\left(\frac{47\pi}{3}\right)$ _____

28. $w\left(-\frac{5\pi}{3}\right)$ _____

29. $w\left(-\frac{5\pi}{6}\right)$ _____

30. $w\left(\frac{5\pi}{2}\right)$ _____

31. $w\left(-\frac{7\pi}{4}\right)$ _____

32. $w(14\pi)$ _____

33. $w\left(-\frac{15\pi}{6}\right)$ _____

34. $w(21\pi)$ _____

35. $w\left(\frac{3\pi}{2}\right)$ _____

36. $w\left(-\frac{3\pi}{2}\right)$ _____

37. $\sin 0$ _____

38. $\cos \frac{\pi}{4}$ _____

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

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

41. $\cos \frac{2\pi}{3}$ _____

42. $\sin \frac{\pi}{3}$ _____

43. $\sin \frac{3\pi}{4}$ _____

44. $\cos \frac{5\pi}{6}$ _____

45. $\cos \pi$ _____

46. $\cos \frac{-13\pi}{3}$ _____

47. $\cos 436\pi$ _____

48. $\sin \frac{7\pi}{6}$ _____

49. $\sin \frac{-41\pi}{2}$ _____

50. $\cos \frac{17\pi}{4}$ _____