Precalculus   Name ___Kingston___

Radian Measures and Trigonometric Functions   Period _____

Find the angle measure θ, such that 0 ≤ θ < 2π, that corresponds to the measure given.

1. $\dfrac{7\pi}{2} = 630°$ 2. $\dfrac{11\pi}{3} = 660°$ 3. $\dfrac{17\pi}{4} = 765°$ 4. $\dfrac{29\pi}{6} = 870°$

$630° - 360° = \boxed{270°}$ $660° - 360° = \boxed{300°}$ $765° - 36 = 405 - 360 = \boxed{45°}$ $870° - 360° = 510° - 360°$

$870° - 360° = 510° - 360°$ $= \boxed{150°}$

5. $\dfrac{-\pi}{2} = -90°$ 6. $\dfrac{-4\pi}{3} = -240°$ 7. $\dfrac{-9\pi}{4} = -405°$ 8. $\dfrac{-17\pi}{6} = -510°$

$-90° + 360° = \boxed{270°}$ $-240° + 360° = \boxed{120°}$ $-405 + 360° = -45 + 360° = \boxed{315°}$

Find the values of the indicated trigonometric functions at the given angle.
Answers must be *exact*. (i.e. radical form)

$-510° + 360°$
$= -150° + 360°$
$= \boxed{210°}$

9. $\sin\dfrac{3\pi}{2} = -1$ 10. $\sin\dfrac{2\pi}{3} = \dfrac{\sqrt{3}}{2}$ 11. $\sin\dfrac{7\pi}{4} = \dfrac{-\sqrt{2}}{2}$ 12. $\sin\dfrac{5\pi}{6} = \dfrac{1}{2}$

13. $\sin\dfrac{-\pi}{2} = -1$ 14. $\sin\dfrac{15\pi}{3} = 0$ 15. $\sin\dfrac{5\pi}{4} = -\dfrac{\sqrt{2}}{2}$ 16. $\sin\dfrac{-13\pi}{6} = -\dfrac{1}{2}$

17. $\cos\pi = -1$ 18. $\cos\dfrac{5\pi}{3} = \dfrac{1}{2}$ 19. $\cos\dfrac{7\pi}{4} = \dfrac{\sqrt{2}}{2}$ 20. $\cos\dfrac{\pi}{6} = \dfrac{\sqrt{3}}{2}$

21. $\cos\dfrac{-\pi}{2} = 0$ 22. $\cos\dfrac{-7\pi}{3} = \dfrac{1}{2}$ 23. $\cos\dfrac{13\pi}{4} = -\dfrac{\sqrt{2}}{2}$ 24. $\cos\dfrac{21\pi}{6} = 0$

25. $\tan\pi = 0$ 26. $\tan\dfrac{\pi}{3} = \sqrt{3}$ 27. $\tan\dfrac{3\pi}{4} = -1$ 28. $\tan\dfrac{5\pi}{6} = -\dfrac{\sqrt{3}}{3}$

29. $\tan\dfrac{-\pi}{2} = und.$ 30. $\tan\dfrac{8\pi}{3} = -\sqrt{3}$ 31. $\tan\dfrac{-14\pi}{4} = und$ 32. $\tan\dfrac{19\pi}{6} = \dfrac{\sqrt{3}}{3}$

33. $\cot\dfrac{\pi}{2} = 0$ 34. $\cot\dfrac{2\pi}{3} = -\dfrac{\sqrt{3}}{3}$ 35. $\cot\dfrac{-3\pi}{4} = 1$ 36. $\cot\dfrac{13\pi}{6} = \sqrt{3}$

37. $\csc\dfrac{\pi}{2} = 1$ 38. $\csc\dfrac{5\pi}{3} = -\dfrac{2\sqrt{3}}{3}$ 39. $\csc\dfrac{7\pi}{4} = -\sqrt{2}$ 40. $\csc\dfrac{\pi}{6} = 2$

41. $\sec\dfrac{-3\pi}{2} = und$ 42. $\sec\dfrac{\pi}{3} = 2$ 43. $\sec\dfrac{11\pi}{4} = -\sqrt{2}$ 44. $\sec\dfrac{-5\pi}{6} = -\dfrac{2\sqrt{3}}{3}$

45. $\tan 7\pi = 0$ 46. $\sec\dfrac{-9\pi}{2} = und$ 47. $\csc\dfrac{21\pi}{2} = 1$ 48. $\cot\dfrac{-19\pi}{2} = 0$