Trig
Chapter 8 Review Pt 2

Name:_____

Inverse Trigonometric Functions

For the following exercises, find the exact value without the aid of a calculator.

28. $\sin^{-1}(1)$

29. $\cos^{-1}\left(\frac{\sqrt{3}}{2}\right)$

30. $\tan^{-1}(-1)$

31. $\cos^{-1}\left(\frac{1}{\sqrt{2}}\right)$

32. $\sin^{-1}\left(\frac{-\sqrt{3}}{2}\right)$

33. $\sin^{-1}\left(\cos\left(\frac{\pi}{6}\right)\right)$

34. $\cos^{-1}\left(\tan\left(\frac{3\pi}{4}\right)\right)$

35. $\sin\left(\sec^{-1}\left(\frac{3}{5}\right)\right)$

36. $\cot\left(\sin^{-1}\left(\frac{3}{5}\right)\right)$

37. $\tan\left(\cos^{-1}\left(\frac{5}{13}\right)\right)$

38. $\sin\left(\cos^{-1}\left(\frac{x}{x+1}\right)\right)$

39. Graph $f(x) = \cos\ x$ and $f(x) = \sec\ x$ on the interval $[0, 2\pi)$ and explain any observations.

40. Graph $f(x) = \sin\ x$ and $f(x) = \csc\ x$ and explain any observations.

41. Graph the function $f\ (x) = \frac{x}{1} - \frac{x^3}{3!} + \frac{x^5}{5!} - \frac{x^7}{7!}$ on the interval $[-1, 1]$ and compare the graph to the graph of $f(x) = \sin\ x$ on the same interval. Describe any observations.