

# Reading Assignment for Section 1.4

MATH 130: Calculus I, Section 4

Spring Semester 2017

**Follow the general guidelines for the Reading Assignment (the salmon colored handout).**

Be sure to include and label all four standard parts 1,2,3,4 of the Reading Assignment in what you hand in. Be sure to **staple** together pages if you have more than one, and include your **name** at the top of the page. Neatness is appreciated!!!

**Due:** at the beginning of class on Wednesday, January 25th

Read:

Section 1.4, pages 38-47: Trigonometric Functions and Their Inverses

Notes:

In this section we review trigonometric functions which are another type of transcendental function. We also look at their inverses, which gives us another application of the previous section. Note that in calculus we will typically use radians not degrees when working with trigonometric functions.

**Remember that your answers should include complete sentences for every question. Be sure to answer all parts of each question!**

Reading Questions for part (1), Response:

- a) Are sine and cosine even or odd functions? How do you know this? Can you explain why in more than one way?
- b) Are any of the trigonometric functions one-to-one? Your answer to this should make you wonder why we can talk about inverse trigonometric functions. Why does it make you wonder? Why can we talk about inverse trigonometric functions?
- c) What is the domain of the secant function? Explain carefully how you could determine this using the definition of the secant function. What is the range of the secant function? Explain.
- d) What is the domain and range of the inverse secant function? Why?
- e) Note that we can write  $\arcsin x$  instead of  $\sin^{-1} x$ , i.e. they are different notations for the same function. Why might we want to use the first way of writing this?

Remember parts 2-4 on the salmon handout!