Review: Trigonometric Functions and Their Inverses

MATH 130: Calculus I

Section _____ Name (Print): _____

Due: Friday, January 25, 2019 at the beginning of class

After reading Section 1.4 (pages 39-48 in the text), respond to the following questions **on this handout**. Be sure to staple your pages together before turning it in. **You must answer all parts to all questions to earn full credit!!!** See the salmon homework guidelines handout for details. You are encouraged to take additional notes wherever you are keeping your class notes. This section should all be review for you!!!

Response Section

1. Draw the diagram in Figure 1.61, including all the ratios for determining values of trigonometric functions. We will use these ideas! One place you will see them appear is in Related Rates at the end of Chapter 3.

2. (a) Draw the graph of $f(x) = \sin x$. Label the point at which f intersects the y-axis, and at least two points at which f intersects the x-axis.

(b) Is f even or odd? Recall these terms were defined in Section 1.1. Explain your conclusion using a short sentence.

(c) Is f one-to-one? Recall this term was defined in Section 1.3. Explain your conclusion using a short sentence.

3. Write down the standard triangles from the side bar on page 41. However, instead of writing the degree values of the angles, write the **radian** values! You may use the unit circle in the adjacent diagram to help you. You should know these values! Make sure you label both the sides AND the angles.

4. Write down the trigonometric identities on page 42 (the whole box!). You should know these too!

5. (a) Draw the diagram including the labels from problem 89 on page 49. (You ONLY need the diagram for this question ignore the text's directions.)

   (b) Use your work in question 1 to express $\sin\theta$ in terms of x.

   (c) Use your work in part (b) to write θ in terms of inverse sine.

Questions/Overview Section

6. Write down at least two questions you have on the reading. OR if you have NO questions, do exercise 86 in Section 1.4 (page 49). See the salmon homework guidelines handout for details.

Reflection Section

7. Write two or three sentences reflecting on the process of your recent work in the course. See the salmon homework guidelines handout for details.

Time Section

8. How much time did you spend on this reading assignment? _____