**Turn-In Assignment: Trigonometric Identities Part II**

**Show all work using Microsoft Equation editor in WORD**

**Task 1**: Refreshing fundamental identities learned in section 6.1

**Turn in Exercise Set 6.1** Problems 31, 35 (Page 651)

31.)

35.)

**Task 2:** Critical thinking exercise on Sum – Difference formula

1. Answer each of the following questions:
2. = ?
3. = ?
4. + = ? (simplify)
5. = = ?
6. Does + equal ? Answer Yes or No
7. Based upon your answers for (a) – (e), do you think  **= +**  is ALWAYS true? Justify your answer.

2. Do you think  **= +**  is ALWAYS true? Justify your answer.

(**Hint:** One way is to follow the steps (a) – (e) in the above problem, replacing Sine with Cosine. There are other ways, too. Be creative! )

**Task 3**: Applying sum/difference formulas for sine, cosine and tangent (Page 661)

**Turn in Exercise Set 6.2**, Problems 10, 17, 19, 31, 38, 40, 61(b), 63(c) (Page 661)

**Hint for 61(b) and 63(c):** Quadrant info is super important

**Instructions:** While solving the above problems, show each step. Otherwise, points will be deducted.

**For question 10, verify and name the identity:**

10.)

**For question 17 and 19, find the exact value of each expression:**

17.)

19.)

**For question 31, write each expression as the sine, cosine, or tangent of an angle. Then find the exact value of the expression:**

31.)

**For question 38 and 40, verify each identity, name the identity:**

38.)

40.).

**For questions 61 and 63, find the exact value of the following under the given conditions:**

61.)

63.)