MAT 182 – Homework 7
Sections 3.3 and 3.4

<u>Directions</u>: Show all work and write your final answer in the space provided.

1. Find the exact value of cos(75°).   1. _____

2. Find the exact value of cos(α + β) if sinα = 3/5 and sinβ = 5/13, with α in quadrant   2. _____
    II and β in quadrant I.

3. Find the exact value of sin(5π/12).   3. _____

4. Write the expression cos(α – π/2) as a function of α alone.   4. _____

5. Find the exact value of sin(α + β) if sinα = 4/5 and sinβ = 5/13, with α in quadrant   5. _____
    II and β in quadrant I.

6. Find the exact value of tan(–15°).   6. _____

7. Write the expression sin(α – π) as a function of α alone.   7. _____

8. Find the exact value of cos(7π/12).   8. _____

9. Write the expression tan(180° + α) as a function of α alone.   9. _____

10. Find the exact value of cos(α + β) if sinα = –7/25 and sinβ = 8/17, with α in   10. _____
    quadrant IV and β in quadrant II.

11. Write the expression tan(π/4 + α) as a function of α alone.   11. _____

12. Write the expression cos(180° + α) as a function of α alone.   12. _____

13. Find the exact value of sin(165°).   13. _____

14. Find the exact value of cos(17π/12).   14. _____

15. Find the exact value of cos(α – β) if sinα = 5/7 and cosβ = 10/13, with α in quadrant 15. _____
    II and β in quadrant IV.

16. Find the exact value of sin(α – β) if sinα = 7/25 and sinβ = –8/17, with α in quadrant 16. _____
    II and β in quadrant III.

17. Find the exact value of tan(13π/12).   17. _____

18. Find the exact value of cos(α + β) if sinα = 2/3 and sinβ = –1/2, with α in quadrant   18. _____
    I and β in quadrant III.

19. Find the exact value of cos(–5π/12).   19. _____

20. Write the expression $\sin(90° + \alpha)$ as a function of α alone.

20. _____