**Pre-Calculus**

**SHOW ALL WORK!**

Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Chapter 7 Review**

1. If , find the exact value of .

2. If  and 180o<<270o, find .

3. Simplify .

4. Simplify .

5. Simplify .

6. Simplify

7. If , find the exact value of 

8. If , find the exact value  
of 

9. Use a sum or difference identity to find the exact value of

10. Use a sum or difference identity to find the exact value of .

11. Find the exact value of if , , *x* and *y* have their terminal sides in the first quadrant.

12. 11. Find the exact value of if , , *x* and *y* have their terminal sides in the first quadrant.

13. Use a sum or difference identity to simplify:

14. Use a sum or difference identity to simplify:

**Use a half-angle identity to find the exact value of each function.**

15.

16.

**Use the double-angle identities to find , , and for 17-18.**

17. ,

18. ,

**Solve.**

19. for

20. for

21.   
for

22. for

23. for all real values of *x*.

24. Find the exact distance between (2,3) and the line with the equation .

25. Find the exact distance between the lines with equations and .

**Verify that each equation is an identity. Show all substitutions with your work.**

26.

27.

28.

29.

30.

31.