Part A: Use the odd / even properties to rewrite each with positive arguments.

Recall:

1. sin (-13)º = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 2. cos  = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3. tan (-135º) = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 4. sec (-) = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

5. -sec (-73º) = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 6. -tan  = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

7. -sin (-305º) = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 8. -cos  = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Part B: Use the cofunction properties to rewrite the following: (pos. arguments)

9. sin 25º = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 10. sec 12º = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

11. tan 88º = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 12. csc 46º = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

13. cot 13º = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 14. cos 90º = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

15. sin  = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 16. cos  = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Part C: If A and B are the measures of two first quadrant angles, find the exact value of each function.

17. If sin A =  and tan B= , find cos(A - B)

18. If csc A =  and tan B= , find sin(A + B)

Part D: Prove that each of the following is an identity. Plug the left side in the sum/difference formulas and simplify.

19. sin(θ + 60º) – cos(θ+ 30º) = sinθ 20. sin(θ+ 30º) + cos(θ + 60º) = cosθ

Part E: Simplify using composite argument properties.

21. sincos + cossin 22. cos65°cos20° + sin65°sin20°

Part F: Using only angles from special right triangles, rewrite the following as a sum or difference of two angles. Then find the exact value using the sum or difference.

23. 24.

25. 26.

27. 28.