Set 1

11: The actual definition of the word tangent comes from the Latin word tangere, meaning “to touch” in mathematics the tangent line touches the graph at a circle at only one point and function values of tan ѳ are obtained from the length of the line segment tangent to a unit circle. Can the line segment ever be greater than 1700 units long?

12: Use the information given to write a sinusoidal and sketch it’s graph, then choose the appropriate equation and graph below. Max 160; min20: P=90?

13: In Vancouver British Columbia the number of hours of daylight reaches a low of 7.4hrs in January, and a high of nearly 14.1 hr in july. Find a sinusoidal equation model for the number of daylight hours each month. Assume t=0 corresponds to January 1st round final and intermediate answers to one decimal place if necessary.

14: Identify the amplitude (A), Period (P), horizontal shift (HS), Verticle shifts (VS), and end points of the primary interval (PI) for each function given. Y=284sin(pi/12t + 4pi/3)+226

15: Find the sinusoidal equation for the information given. If nessecary round calculations to the nearest hundredth. Minimum value at ( 6,8280); max value at (22,23126); period 32year.

Set 2

1: Fill in the blank with the appropriate word or phrase. Two fundamental reciprocal identities are: sin ѳ=1/? And cos ѳ=1/?

2: Verify the equation is an identity using factoring and fundamental identities. Tan^2 x csc^2 x –tan ^2 x =1. Is this equation an identity?

3: write the given function entirely in terms of the second function indication. Sec x in terms of tan x.

4: Is this equation an identity? ?



5: writing a given expression in an alternative form is an idea used at all levels of mathematics. In future classes, it is often helpful to decompose a power into smaller powers (as in writing A^3 as A\*A^2) or to write an expression using known identities so it can be factored. Can 6sin^2 x cos x - x be factored into (1-cos x )(1+cos x )(6cos x -)?



6: Is this equation an identity?



7: Is this equation an identity? =cos x



8: Is this equation an identity? (csc x +cot x )^2=



9: Fill in each blank with the appropriate word or phrase. Two fundamental Pythagorean identities are? Sin^2 ѳ +?^2=1 and 1+?^2=csc^2 ѳ

10: Find the exact value of the given expression? Cos() cos(-sin(sin(



11: Rewrite as a single expression. Sin () cos ( + cos () sin (



12: Find the exact value of the expression using a sum or difference identities. Sin 135⁰

13: Given a and B are acute angles with cos a= and sec B= , find sin (a+B)?



14: Is this equation an identity? Cos (a+B) + cos (a-B) =-2 cos a cos B?

15: Find exact values for sin (20), cos (20), and tan (20) using the information given. Cot (ѳ) = -; ѳ in QII

