PRE-CALC & TRIG

Day 42

Bell Work

Simplify:

$$\sin t \csc t - \cos t \sec t$$

Objective

- Preview Second Semester of Pre-Calc and Trig
- Quick Review of First Semester Pre-Calc and Trig

Second Semester Break Down (3rd Quarter)

Week of Jan 9: Review 1st semester & Start Trig Identities
Week of Jan 15: Trig Identities
Week of Jan 22: Trig Identities
Week of Jan 29: Review Trig Identities
Week of Feb 5: Analytic Trig Test and Law of Sine/Cosine
Week of Feb 12: Law of Sine/Cosine and Vectors
Week of Feb 19: More Trig Identities Test
Week of Feb 26: Systems of Equations
Week of Mar 5: Systems of Equations Test
---End 3rd Quarter---

Second Semester Break Down (4th Quarter)

Week of Mar 12: Spring Break

Week of Mar 19: Start an ACT Unit: Pre; Elem; Interm. Algebra & Geometry

Week of Mar 26: ACT Unit: ACT & Strategies, Practice Exam

Week of Apr 2: Start Matrices Unit (ACT TEST ON 4/3)

Week of Apr 9: Matrices Test

Week of Apr 16: Intro to Calculus with Limits

Week of Apr 23: Calc Limits and Area

Week of Apr 30: Intro to Calc Test and Start Sequences and Series

Week of May 7: Sequence and Series Test (SENIOR FINALS)

Week of May 14: Review for Finals

Week of May 21: Take Finals

---End 4th Quarter---

Trig Identities (Section 4.3 Notes)

Reciprocal Identities

$$\cos\theta = \frac{1}{sec\,\theta} \qquad \sec\theta = \frac{1}{cos\,\theta}$$

$$\sin\theta = \frac{1}{csc\,\theta} \qquad \csc\theta = \frac{1}{sin\,\theta}$$

$$\tan\theta = \frac{1}{cot\,\theta} \qquad \cot\theta = \frac{1}{tan\,\theta}$$

Quotient Identities

$$\tan\theta = \frac{\sin\theta}{\cos\theta} \qquad \cot\theta = \frac{\cos\theta}{\sin\theta}$$

Pythagorean Identities

$$\boldsymbol{sin^2\theta + cos^2\theta = 1}$$

Therefore,

$$\boldsymbol{1 + tan^2\theta = sec^2\theta}$$

But how?

$$\boldsymbol{1 + cot^2\theta = csc^2\theta}$$

Simplify

1.) $\csc x \sec x - \tan x$

2.) $\dfrac{1 - sin^2 x}{csc^2 x - 1}$

For Next Time

Page 307 #37 – 46