Mth113 FRIDAY 2-8-13 CLASS NOTES

"THINGS to DO" WHEN VERIFYING TRIG IDENTITIES

- Assuming you know the Reciprocal Identities, the Pythagorean Identies, the "TAN" Id.'s. etc.

- PUT everything into SIN/COS.
- Work on the more complicated side.
- Common Denominators $\frac{1}{a}+\frac{1}{b}$ CD $=ab$
- * Difference of Sq. Pattern $a^2-b^2=(a-b)(a+b)$
- Mult. by ONE $\Rightarrow \frac{\cos}{\cos}$ or $\frac{\sin^2}{\sin^2}$
- FACTOR (EX) $\sin^2\theta+\sin\theta$
  whole expression or group.
- Alternate forms of the Pythagorean Identities.
- Work both sides if needed

(37) $\dfrac{1+\csc\theta}{1+\sec\theta} = \cot\theta\left(\dfrac{1+\sin\theta}{1+\cos\theta}\right)$

$\dfrac{1+\frac{1}{\sin\theta}}{1+\frac{1}{\cos\theta}} \cdot \dfrac{\sin\theta}{\sin\theta}$

$\dfrac{\sin\theta+1}{\sin\theta+\frac{\sin\theta}{\cos\theta}}$

$\dfrac{\sin\theta+1}{\sin\theta+\tan\theta} \cdot \dfrac{\cos\theta}{\cos\theta}$

$\dfrac{\sin\theta}{\sin\theta+\tan\theta} + \dfrac{1}{\sin\theta+\tan\theta}$

$\dfrac{\sin\theta\cos\theta+\cos\theta}{\sin\theta\cos\theta+\sin\theta}$

$\dfrac{\cos\theta}{\sin\theta}\left(\dfrac{1+\sin\theta}{1+\cos\theta}\right)$

$\dfrac{\cos\theta+\cos\theta\sin\theta}{\sin\theta+\cos\theta\sin\theta}$

$\dfrac{\cos\theta}{\sin\theta+\cos\theta\sin\theta} + \dfrac{\cos\theta\sin\theta}{\sin\theta+\cos\theta\sin\theta}$

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