

Happy Tuesday, March 7th!

Do Now: Revisit yesterday's exit slip! I made a mistake.

$$\sin(x) + \sin(x)\cot^2(x) = \sin(x)\csc^2(x)$$

$$\sin(x)(1 + \cot^2(x))$$

$$\sin(x)(\csc^2(x))$$



Q.E.D

Mar 7-6:56 AM

Homework Questions from Last Night?

$$\textcircled{4} \frac{\sec^2\theta - 1}{\sin\theta} \rightarrow \frac{\tan^2\theta + 1}{\sin\theta}$$

$$\frac{\tan^2\theta}{\sin\theta} \rightarrow \frac{\frac{\sin^2\theta}{\cos^2\theta}}{\sin\theta}$$

$$\frac{\sin\theta}{\cos^2\theta} = \frac{\sin\theta}{1 - \sin^2\theta}$$

$$(\cos x - \sin x)(\cos x - \sin x)$$

$$\cos^2 x - \cos x \sin x - \sin x \cos x + \sin^2 x$$

$$\cos^2 x - 2\cos x \sin x + \sin^2 x$$

$$1 - 2\sin x \cos x$$

Mar 7-7:03 AM

Long Worksheet

$$\frac{1}{\sin x \cdot \cos x} = \frac{\cos x}{\sin x \cdot \cos^2 x} = \frac{\cos x}{\sin x \cos^2 x}$$

$$\frac{1}{\sin x \cdot \cos x} = \frac{\cos x}{\sin x \cos^2 x}$$

$$\frac{1}{\sin x \cdot \cos x} = \frac{\cos x}{\sin x \cos^2 x}$$

$$\frac{1}{\sin x \cdot \cos x} = \frac{\cos x}{\sin x \cos^2 x}$$

$$\frac{\sin^2 x + \cos^2 x}{\sin x \cos x} = \frac{1}{\sin x \cos x}$$

$$\frac{1}{\sin x \cos x} = \frac{1}{\sin x \cos x}$$

$$\frac{1}{1 - \sin^2 x} = \frac{1}{\cos^2 x}$$

$$\frac{1}{1 - \sin^2 x} = \frac{1}{\cos^2 x}$$

$$\frac{1}{1 - \sin^2 x} = \frac{1}{\cos^2 x}$$

$$\frac{1}{1 - \sin^2 x} = \frac{1}{\cos^2 x}$$

$$\frac{1}{\cos^2 x} + \frac{1}{\cos^2 x} = \frac{2}{\cos^2 x}$$

$$\frac{1}{\cos^2 x} + \frac{1}{\cos^2 x} = \frac{2}{\cos^2 x}$$

$$\frac{1}{\cos^2 x} + \frac{1}{\cos^2 x} = \frac{2}{\cos^2 x}$$

$$\frac{1}{\cos^2 x} + \frac{1}{\cos^2 x} = \frac{2}{\cos^2 x}$$

Mar 6-7:48 AM

$$x^2 - y^2$$

$$(x + y)(x - y)$$

Mar 7-8:47 AM

- U6LT3 Inverse Trig
- U6LT4 Law of Sine/Cosine
- U7LT3 Modeling
- U8LT1 Proofs
- **U8LT2 Solving**
- U9LT3 and U9LT4

Optional next
Thursday,
March 16th

Mar 7-7:19 AM

U8LT1 I can prove and simplify trigonometric identities.

Mar 7-7:07 AM

What's the difference between PROVING, SOLVING, and SIMPLIFYING?

Proving	Solving	Simplifying
<p>Have</p> <p>Reason for answer</p> <p>* GOAL</p> <p>* Something to EQUAL</p> <p><u>=</u></p> <p>Showing something is true w/ reason</p> <p>Use Simplifying</p>	<p>Find</p> <p>finding an answer</p> <p><u>x =</u></p> <p>Answer Simplified</p>	<p>No</p> <p>* Compact Small</p> <p>* No "answer"</p> <p>* No =</p>

Mar 7-7:09 AM

Which is the MOST SIMPLIFIED?

$$\frac{5}{15} \quad \left(\frac{1}{3} \right)$$

$$x^2 + 7x + 6 \quad (x + 6)(x + 1)$$

$$1 - \cos^2(x) = \sin^2(x)$$

$$\sin(x) \cos(x) \tan(x)$$

$$\sin^2(x)$$

$$\frac{1}{\csc(x)} \quad \sin(x)$$


Mar 7-7:13 AM

$$\frac{\overset{\text{sec}x+1}{1}}{\underset{\text{sec}x+1}{\text{sec}x-1}} + \frac{\overset{\text{sec}x-1}{1}}{\underset{\text{sec}x-1}{\text{sec}x+1}} \rightarrow \frac{2 \text{sec} x}{\text{sec}^2 x - 1}$$

$$\frac{\text{Sec}x+1 + (\text{sec}x-1)}{(\text{sec}x-1)(\text{sec}x+1)} \rightarrow \frac{2 \text{sec} x}{\tan^2 x}$$

$$2 \frac{\left(\frac{1}{\cos x}\right)}{\left(\frac{\sin x}{\cos x}\right)}$$

$$2 \left(\frac{1}{\cos x}\right) \cdot \frac{\cos^2 x}{\sin^2 x}$$

2 cot x csc x 

$$\boxed{\frac{2 \cos x}{\sin^2 x}} \cdot \frac{2 \cos}{\sin} \cdot \frac{1}{\sin} \rightarrow \boxed{2 \cot x \csc x}$$

Mar 7-7:53 AM

tan x + cot x

$$\frac{\sin x}{\cos x} + \frac{\cos x}{\sin x}$$



$$\frac{\sin^2 x + \cos^2 x}{\cos x \sin x}$$

$$\frac{1}{\cos x \sin x}$$

sec x csc x

Mar 7-7:55 AM

$$\frac{\cot^2 x}{1 + \csc x}$$



Mar 7-7:34 AM

Exit Slip: Simplify the following:

$$\frac{\tan x}{\sec x} \quad \frac{\frac{\sin}{\cos}}{\frac{1}{\cos}} \quad \sin$$

Mar 7-7:56 AM