

Quiz 7 MATH 1540 Fall 2018.

Simplify

$$\csc\left(\frac{\pi}{2} - x\right)$$

Soln: $\csc\left(\frac{\pi}{2} - x\right) = \frac{1}{\sin\left(\frac{\pi}{2} - x\right)}$

$$\stackrel{\text{sum/difference}}{=} \frac{1}{\sin\left(\frac{\pi}{2}\right)\cos(x) - \cos\left(\frac{\pi}{2}\right)\sin(x)}$$

$$= \frac{1}{1 \cdot \cos(x) - 0 \cdot \sin(x)}$$

$$= \frac{1}{\cos(x)}$$

$$= \sec(x)$$