

## Warm-up: Simplifying Identities

1.  $\tan(-x) + \cot(-x)$

$$-\tan x - \cot x$$

$$\frac{\sin x \cdot -\sin x}{\sin x \cdot \cos x} - \frac{\cos x \cdot \cos x}{\sin x \cdot \cos x}$$

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

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

$$\boxed{-\csc x \sec x}$$

2.  $\cos\left(\frac{\pi}{2} - x\right) \cdot \cot(x)$

$$\sin x \cdot \cot x$$

$$\cancel{\sin x} \cdot \frac{\cos x}{\cancel{\sin x}}$$

$$\boxed{\cos x}$$

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