

Name : \_\_\_\_\_

## Verify - Sum & Difference Identities

Verify the following.

1)  $\frac{1 - \tan x}{1 + \tan x} = \tan(45^\circ - x)$

2)  $\frac{\sin(x + y)}{\sin(x - y)} = \frac{\tan x + \tan y}{\tan x - \tan y}$

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3)  $\cos(x - 225^\circ) = -\frac{\sqrt{2}}{2}$

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## Verify - Sum & Difference Identities

Verify the following.

4)  $\cos(x + y) \cos(x - y) = \cos^2 x - \sin^2 y$

5)  $\sin\left(\frac{\pi}{6} + x\right) = \frac{\cos x + \sin x}{2}$

6)  $\tan\left(x + \frac{7\pi}{4}\right) = \frac{\tan x - 1}{1 + \tan x}$

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