

Warm Up 3/4**Lesson 7-3: Sum-to-Product Formulas****Objectives**

Students will...

- Be able to know the Sum-to-Product Formulas.
- Be able to use the Sum-to-Product formulas to prove identities.

Sum-to-Product Formulas

We now move further into different formulas for trig functions. The following is the **Sum-to-Product** formulas, which do exactly as it says- turn sums (addition or subtraction) into products (multiplication).

Sum-to-Product Formulas:**Using Sum-to-Product Formulas**Write $\sin 7x + \sin 3x$ as a product.Write $\sin 11x + \sin 5x$ as a product.**Example**

Verify the identity:

$$\frac{\sin 3x - \sin x}{\cos 3x + \cos x} = \tan x$$

PreCalculus

Name:

Period:

Date:

Verify the identity:

$$\frac{\sin 4x + \sin 2x}{\sin 2x} = \frac{\sin 3x}{\sin x}$$

Homework 3/4
TB pg. 548-549 #47-53 (odd), 72, 74, 75, 77