

**Section 5.4 Sum and Difference Formulas**

**Objective:** In this lesson you learned how to use sum and difference formulas to rewrite and evaluate trigonometric functions.

Course Number

Instructor

Date

**I. Using Sum and Difference Formulas** (Pages 380–383)

List the sum and difference formulas for sine, cosine, and tangent.

***What you should learn***

How to use sum and difference formulas to evaluate trigonometric functions, to verify identities, and to solve trigonometric equations

**Example 1:** Use a sum or difference formula to find the exact value of  $\tan 255^\circ$ .

**Example 2:** Find the exact value of  $\cos 95^\circ \cos 35^\circ + \sin 95^\circ \sin 35^\circ$ .

A **reduction formula** is . . .

**Example 3:** Derive a reduction formula for  $\sin\left(t + \frac{\pi}{2}\right)$ .

**Example 4:** Find all solutions of  $\cos(x - \frac{\pi}{3}) + \cos(x + \frac{\pi}{3}) = 1$   
in the interval  $[0, 2\pi)$ .

**Additional notes**

**Homework Assignment**

Page(s)

Exercises