

**Notes/Guided Practice: 5.4 Sum and Difference Formulas****Sum and Difference Formulas**

$$\sin(u \pm v) = \sin u \cos v \pm \cos u \sin v$$

$$\cos(u \pm v) = \cos u \cos v \mp \sin u \sin v$$

$$\tan(u \pm v) = \frac{\tan u \pm \tan v}{1 \mp \tan u \tan v}$$

These formulas are used to find exact trigonometric values using the basic trigonometric values (of special angles) we already know.

Example #1

**Find the exact values of sine, cosine, and tangent of  $105^\circ$ .**

Example #2

**Find the exact values of sine, cosine, and tangent of  $\frac{\pi}{12}$ .**

Example #3

**Write  $\sin 3.5 \cos 1.2 - \cos 3.5 \sin 1.2$  as the sine, cosine or tangent of an angle.**





