

## 7.2 Compound Angle Formulas (Day 2)



"By the end of today's lesson:

I can derive and apply all compound angle formulas.

I can apply what I have learned in unfamiliar settings."

$$\sin(a \pm b) = \sin a \cos b \pm \cos a \sin b$$

$$\cos(a \pm b) = \cos a \cos b \mp \sin a \sin b$$

**Ex. 1:** If  $\sin x = \frac{2}{3}$  and  $\cos y = -\frac{4}{5}$ , where  $\frac{\pi}{2} < x < \pi$ ,  $\frac{\pi}{2} < y < \pi$ ,

evaluate  $\sin(x - y)$

**Ex. 2:** Prove the identity  $\tan(a \pm b) = \frac{\tan a \pm \tan b}{1 \mp \tan a \tan b}$