From www.analyzemath.com

Trigonometry Worksheet: Addition Formula (1)

1. Use the fact that $\dfrac{\pi}{3} - \dfrac{\pi}{4} = \dfrac{\pi}{12}$ to find $\sin(\dfrac{\pi}{12})$.

2. x is a third quarter angle such that $\sin(x) = \dfrac{-1}{5}$ and y is a second quarter

   angle such that $\cos(y) = \dfrac{-1}{3}$. Find $\sin(x + y)$.