

## Precalculus Notes

### Lesson 5.4 Sum and Difference Formulas Part 2

**Example 1:** Given that  $\sin u = \frac{7}{25}$ , where  $0 < u < \frac{\pi}{2}$  and  $\cos v = -\frac{4}{5}$ , where  $\frac{\pi}{2} < v < \pi$ ,  
find the exact value of  $\cos ( u + v )$

**Example 2:** Write  $\sin(\arctan 1 + \arccos x)$  as an algebraic expression.

**Example 3:** Prove the co-function identity  $\sin(x - \frac{\pi}{2}) = -\cos x$ .

**Example 4:** Simplify each expression

a.  $\sin(\frac{3\pi}{2} - \vartheta)$

b.  $\tan(\vartheta - \frac{\pi}{4})$

**Homework:** Pages 402 – 403 #43-55 odd, 57 - 60 all, 61-73 odd (simplify 71 and 73 algebraically)