

## Quiz 7

$$\cos(u - v) = \cos(u) \cos(v) + \sin(u) \sin(v)$$

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

1. Find all solutions to the equation in the interval  $[0, 2\pi)$ . (7 pts.)

$$(\csc x - 2)(\cot x + 1) = 0$$

2. Verify the identity  $\tan\left(x + \frac{\pi}{2}\right) = -\cot x$ . (6 pts.)

3. Compute the exact value of  $\sin(60^\circ - 45^\circ)$ . (7 pts.)