

- 15.16**
- 1) $\cos(\alpha + \beta) = \cos(\alpha - (-\beta)) = \cos(\alpha) \cos(-\beta) + \sin(\alpha) \sin(-\beta) =$
 $\cos(\alpha) \cos(\beta) - \sin(\alpha) \sin(\beta)$
 - 2) $\sin(\alpha + \beta) = \cos(\frac{\pi}{2} - (\alpha + \beta)) = \cos((\frac{\pi}{2} - \alpha) - \beta) =$
 $\cos(\frac{\pi}{2} - \alpha) \cos(\beta) + \sin(\frac{\pi}{2} - \alpha) \sin(\beta) = \sin(\alpha) \cos(\beta) + \cos(\alpha) \sin(\beta)$
 - 3) $\sin(\alpha - \beta) = \sin(\alpha + (-\beta)) = \sin(\alpha) \cos(-\beta) + \cos(\alpha) \sin(-\beta) =$
 $\sin(\alpha) \cos(\beta) - \cos(\alpha) \sin(\beta)$