

1. Do this on your own: Prove that  $\cos(\theta) = \sin(\theta + \pi/2)$  and  $\sin(\theta) = \cos(\theta - \pi/2)$ .
2. You may work on this together: Prove that  $\cos(\alpha + \beta) = \cos(\alpha)\cos(\beta) - \sin(\alpha)\sin(\beta)$ . (Hint: Draw a picture similar to the one we drew in class for  $\sin(\alpha + \beta)$ .)