

Verify. Show enough work so that I could duplicate your answers.

1. $\sin(270^\circ + \theta) = -\cos \theta$

2. $\cos(90^\circ + \theta) = -\sin \theta$

3. $\tan(90^\circ + \theta) = -\cot \theta$

4. $\sin\left(\frac{\pi}{2} + x\right) = \cos x$

5. $\sin^2 \alpha - \sin^2 \beta = \sin(\alpha + \beta)\sin(\alpha - \beta)$

6. $\frac{\sin(\beta - \alpha)}{\sin \alpha \sin \beta} = \cot \alpha - \cot \beta$