1. Prove that:
   $\frac{1}{1+\sin\theta} + \frac{1}{1-\sin\theta} = 2\sec^2\theta$
2. Prove that:
   $\frac{(1+\sin\theta)^2+(1-\sin\theta)^2}{2\cos^2\theta} = \sec^2\theta + \tan^2\theta$
3. Prove that:
   $1 + \frac{\tan^2\theta}{1+\sec\theta} = \sec\theta$