1. Prove:

$$\frac{\cos\theta}{1-\tan\theta} + \frac{\sin\theta}{1-\cot\theta} = \sin\theta + \cos\theta$$

2. Prove:

$$\frac{\sin\theta}{1-\cos\theta} = \operatorname{cosec}\theta + \cot\theta$$

3. Prove:

$$\frac{1-\sin\theta}{\cos\theta} + \frac{\cos\theta}{1-\sin\theta} = 2\sec\theta$$

4. Prove:

$$\frac{\tan\theta}{1-\cot\theta} + \frac{\cot\theta}{1-\tan\theta} = 1 + \tan\theta + \cot\theta$$

5. Prove:

$$\frac{\operatorname{cosec}A}{\operatorname{cosec}A-1} + \frac{\operatorname{cosec}A}{\operatorname{cosec}A+1} = 2 + 2\tan^2 A$$

6. Prove:

$$\sqrt{\frac{1+\sin\theta}{1-\sin\theta}} + \sqrt{\frac{1-\sin\theta}{1+\sin\theta}} = 2\sec\theta$$

7. Prove:

$$\cot\theta - \tan\theta = \frac{2\cos^2\theta - 1}{\sin\theta\cos\theta}$$

8. Prove:

$$\frac{\sin\theta + 1 - \cos\theta}{\cos\theta - 1 + \sin\theta} = \frac{1-\sin\theta}{\cos\theta}$$