EXAMPLES: $\left(\text{DAY } 1\right)$

$$\frac{\sec^2\theta}{1+\cot^2\theta} = \tan^2\theta$$

2) $\quad \dfrac{\tan\theta\csc\theta}{\sec\theta} = 1$

3) $\quad \tan\theta\cos^2\theta = \sin\theta\cos\theta$

4) $\quad \dfrac{\tan\theta}{\cot\theta} = \tan^2\theta$

5) $\quad \cos\theta\tan\theta\csc\theta = 1$

6) $\quad \dfrac{1}{\sin^2\theta} - \dfrac{\cos^2\theta}{\sin^2\theta} = 1$

7) $\quad \dfrac{\cos^2\theta}{1+\sin\theta} = 1-\sin\theta$

8) $\quad \dfrac{\csc\theta}{1+\cot^2\theta} = \sin\theta$

9) $\quad (1-\sin\theta)(1+\sin\theta) = \cos^2\theta$

10) $\quad \cos^4\theta + 2\cos^2\theta\sin^2\theta + \sin^4\theta = 1$

11) $\quad \sin\theta + \cos\theta\tan\theta = 2\sin\theta$

EXAMPLES (DAY 2):

1) $\dfrac{\sec^2\theta - \tan^2\theta}{\sin^2\theta + \cos^2\theta} = 1$

2) $\sin\theta\cos\theta\sec\theta\csc\theta = 1$

3) $\dfrac{\sin\theta\cos^2\theta + \sin^3\theta}{\sin\theta + \cos\theta} = \dfrac{\sin\theta}{\sin\theta + \cos\theta}$

4) $\dfrac{1 + \tan^2\theta}{1 + \cot^2\theta} = \tan^2\theta$

EXAMPLES: $\left(\text{DAY } 3\right)$

1) $\dfrac{\cos\theta + \tan\theta}{\sin\theta} = \sec\theta + \cot\theta$

2) $\dfrac{\cos\theta + \cot\theta}{\csc\theta + 1} = \cos\theta$

3) $\sin^3\theta + \sin\theta\cos^2\theta = \sin\theta$

4) $\sin^2\theta - \cos^2\theta = 1 - 2\cos^2\theta$

$\dfrac{1}{1+\sin\theta}+\dfrac{1}{1-\sin\theta}=2\sec^2\theta$

6) $(\cos\theta-\sin\theta)^2+2\sin\theta\cos\theta=1$

7) $\sin^4\theta-\cos^4\theta=2\sin^2\theta-1$

8) $\dfrac{\tan\theta-\cot\theta}{\tan\theta+\cot\theta}=2\sin^2\theta-1$