

43) Notice that " $\cot^2$ " and " $\csc^2$ " are written. They should have been " $\cot^2 \theta$ " and " $\csc^2 \theta$ ". (2)

$$53) \cot(\theta) \sin(\theta) = \frac{\cos \theta}{\sin \theta} \cdot \sin \theta = \cos \theta$$

$$55) \cos(\theta) \csc(\theta) = \cos(\theta) \cdot \frac{1}{\sin \theta} = \frac{\cos \theta}{\sin \theta} = \cot \theta$$

$$57) \sin^2(\theta) (\csc^2 \theta - 1) = (\sin^2 \theta) (\cot^2 \theta) = (\sin^2 \theta) \left( \frac{\cos^2 \theta}{\sin^2 \theta} \right) = \cos^2 \theta$$