The Weekly Rigor

No. 388

"A mathematician is a machine for turning coffee into theorems."

November 27, 2021

Verifying Trigonometric Identities with Simple Arguments Involving the Product of Three Trigonometric Functions: Problems with Solutions
(Part 13)

53.
$$\sin^2 \theta \cdot \csc \theta = \csc \theta - \cos \theta \cdot \cot \theta$$
.

54.
$$\cos^2 \theta \cdot \sec \theta = \sec \theta - \sin \theta \cdot \tan \theta$$
.

55. $\sin^2 \theta \cdot \cot \theta = \cot \theta - \cos^2 \theta \cdot \cot \theta$.

56. $\cos^2 \theta \cdot \tan \theta = \tan \theta - \sin^2 \theta \cdot \tan \theta$.