Verifying Trigonometric Identities with Simple Arguments Involving the Product of Three Trigonometric Functions: Problems with Solutions
(Part 10)

41. $\sin^3 \theta = \sin \theta - \sin \theta \cdot \cos^2 \theta$.

42. $\cos^3 \theta = \cos \theta - \cos \theta \cdot \sin^2 \theta$.

43. $\tan^3 \theta = \tan \theta \cdot \sec^2 \theta - \tan \theta$.

44. $\cot^3 \theta = \cot \theta \cdot \csc^2 \theta - \cot \theta$.