

Task #2 – Trig Identities “Pick Up Sticks!”

$$\begin{array}{cccc}
 & & \tan^2 x + 1 & \cos^2 x - \sin^2 x \\
 & & 1 + \cot^2 x & \cdot \tan^2 x \\
 & & & - \sin x \\
 1 - \sin^2 x & & & \\
 & & \frac{\sin^2 x}{\cos^2 x} & \cdot 4 \csc x \\
 & & & \cos(2x) \\
 3 \sec x & \frac{4}{\sin x} & 2 \sin x \cos x & \cos(-x) \\
 & & & \sin(x-y) \\
 5 \sin x \csc x & \sin(x+y) & \cos(x+y) & \sec^2 x \\
 & & & \cos^2 x \\
 & & \csc^2 x & \cos x \cos y - \sin x \sin y \\
 & & & \tan(-x) \\
 & & -\tan x \cdot & \sin^2 x \cos y - \cos x \sin y \\
 & & 7 \tan x \cot x & 4 \cot x \\
 \sin(-x) & & & \sin x \cos y + \cos x \sin y \\
 \frac{4 \cos x}{\sin x} & & & 7 \\
 & \frac{3}{\cos x} \cdot & \sin(2x) & \cos x & 5
 \end{array}$$