

$$\sec^2 x - \tan x \cot x = \tan^2 x$$

$$\begin{aligned} \sec^2 x - \frac{\cancel{\sin x}}{\cancel{\cos x}} \frac{\cos x}{\cancel{\sin x}} &= \\ \sec^2 x - 1 &= \\ \tan^2 x + 1 - 1 &= \\ \tan^2 x &= \tan^2 x \end{aligned}$$

$$\frac{\sin A}{\csc A} + \frac{\cos A}{\sec A} = \csc^2 A - \cot^2 A$$

$$\frac{\sin A}{\frac{1}{\sin A}} + \frac{\cos A}{\frac{1}{\cos A}} = 1 + \underline{\cot^2 A} - \underline{\cot^2 A}$$

$$\begin{aligned} \sin^2 A + \cos^2 A &= 1 \\ 1 &= 1 \end{aligned}$$

$$\frac{7 \sin \theta + 5 \cos \theta}{\sin \theta \cos \theta} = 7 \sec \theta + 5 \csc \theta$$

$$\frac{7 \cancel{\sin \theta} + 5 \cancel{\cos \theta}}{\cancel{\sin \theta} \cos \theta} + \frac{5 \cancel{\cos \theta}}{\sin \theta \cancel{\cos \theta}} =$$

$$\frac{7}{\cos \theta} + \frac{5}{\sin \theta} =$$

$$7\left(\frac{1}{\cos \theta}\right) + 5\left(\frac{1}{\sin \theta}\right) =$$

$$7 \sec \theta + 5 \csc \theta = 7 \sec \theta + 5 \csc \theta$$

p. 434

13-27 odd