Let $\sin x \cos x = 0.35$ and $\sin x + \cos x = 1.30$. Which is $\csc x + \sec x$?

Solution.

Transform the expression $\csc x + \sec x$:

$$\csc x + \sec x = \frac{1}{\sin x} + \frac{1}{\cos x} = \frac{\cos x + \sin x}{\sin x \cos x}$$

Use values of $\sin x \cos x$ and $\sin x + \cos x$ to find $\csc x + \sec x$:

$$\frac{\cos x + \sin x}{\sin x \cos x} = \frac{1.3}{0.35} = \frac{26}{7} \approx 3.71$$

Answer: 3.71.