26. $$\begin{aligned}\int \tan^5 2x \sec^4 2x\, dx &= \int \tan^5 2x\left(\tan^2 2x + 1\right)\sec^2 2x\, dx \\ &= \int \tan^7 2x \sec^2 2x\, dx + \int \tan^5 2x \sec^2 2x\, dx \\ &= \frac{1}{2}\left(\frac{\tan^8 2x}{8}\right) + \frac{1}{2}\left(\frac{\tan^6 2x}{6}\right) + C \\ &= \frac{\tan^8 2x}{16} + \frac{\tan^6 2x}{12} + C\end{aligned}$$