$$\begin{aligned}\int_0^{\pi/2} 3\cos^2\theta\,d\theta &= 3\int_0^{\pi/2} \tfrac{1}{2}(1+\cos 2\theta)\,d\theta \quad \text{[half-angle identity]} \\ &= \tfrac{3}{2}\big[\theta + \tfrac{1}{2}\sin 2\theta\big]_0^{\pi/2} = \tfrac{3}{2}\big[\big(\tfrac{\pi}{2}+0\big) - (0+0)\big] = \tfrac{3\pi}{4}\end{aligned}$$