

Let $u = 3\theta$, $dv = \cos \theta d\theta \Rightarrow du = 3d\theta$, $v = \sin \theta$. Then by Equation 2,
 $\int 3\theta \cos \theta d\theta = 3\theta \sin \theta - 3 \int \sin \theta d\theta = 3\theta \sin \theta + 3 \cos \theta + C$.