

$$\begin{aligned}\int_1^4 \int_0^1 (1 + 8xy) dx dy &= \int_1^4 [x + 4x^2y]_{x=0}^{x=1} dy = \int_1^4 (1 + 4y) dy \\ &= [y + 2y^2]_1^4 = (4 + 32) - (1 + 2) = 33\end{aligned}$$