$$\begin{aligned}\iint_D 7xy^2\,dA &= \int_{-2}^{2}\int_{0}^{\sqrt{4-y^2}} 7xy^2\,dx\,dy = \int_{-2}^{2} 7y^2\left[\frac{1}{2}x^2\right]_{x=0}^{x=\sqrt{4-y^2}}\,dy \\ &= \tfrac{7}{2}\int_{-2}^{2} y^2(4-y^2)\,dy = \tfrac{7}{2}\int_{-2}^{2}(4y^2-y^4)\,dy \\ &= \tfrac{7}{2}\left[\tfrac{4}{3}y^3-\tfrac{1}{5}y^5\right]_{-2}^{2} = \tfrac{7}{2}\left(\tfrac{32}{3}-\tfrac{32}{5}+\tfrac{32}{3}-\tfrac{32}{5}\right) = \tfrac{448}{15}\end{aligned}$$