10) $\int_0^3 \int_1^2 x^2 \cdot y \cdot dy \cdot dx$

$\int_0^3 x^2 \cdot dx \int_1^2 y \cdot dy$

$\int_0^3 x^2 \cdot dx \cdot \left[\frac{y^2}{2}\right]_1^2$

$\int_0^3 x^2 \cdot dx \cdot \left[\frac{2^2}{2}\right] \cdot \left[\frac{1^2}{2}\right] = [2] - [1/2]$

$\int_0^3 x^2 \cdot dx \cdot \frac{3}{2} = \int_0^3 \frac{3x^2}{2} \cdot dx$

$\left[\frac{3}{2} \cdot \frac{x^3}{3}\right]_0^3 = \left[\frac{3^3}{3}\right] - [0]$

$\left[\frac{3}{2} \cdot 9\right] = \left[\frac{27}{2}\right] = \boxed{13,5}$