$$\iint_D xy^2\,dx\,dy = \int_1^2 \left[\int_{\frac{y^2}{4}}^{y^2} xy^2\,dx\right] dy$$

(Am 1,25)

$$= \int_1^2 y \left.\frac{x^2}{2}\right|_{\frac{y^4}{4}}^{y^4} dy$$

$$= \int_1^2 y \left(\frac{y^8}{8} - \frac{y^8}{32}\right) dy$$

$$= \frac{3}{32} \int_1^2 y^9\,dy$$

$$= \frac{1}{32} \left.y^3\right|_1^2 = \frac{7}{32}$$

(Am 0,75)