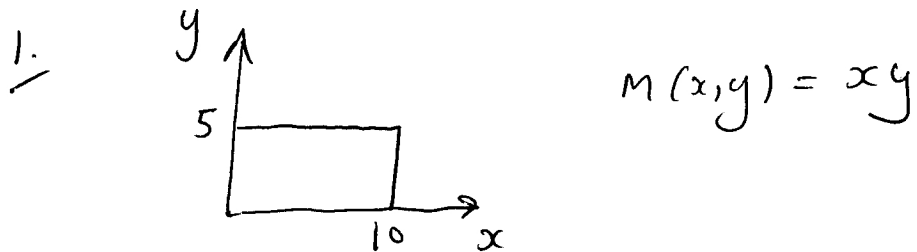
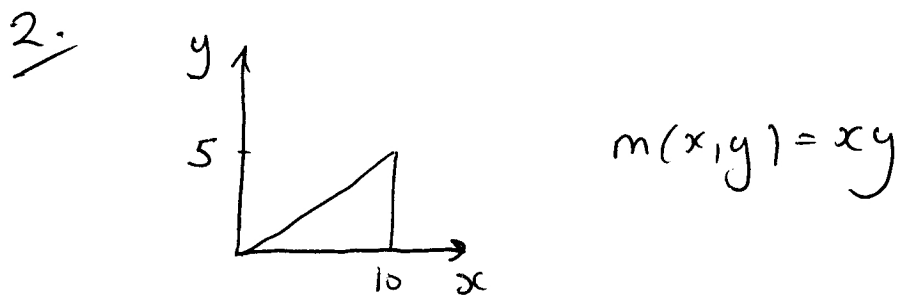


# Exercício 4



$$\begin{aligned} M &= \iint m \, dA = \int_0^{10} \int_0^5 xy \, dx \, dy \\ &= \int_0^{10} x \, dx \int_0^5 y \, dy = \left[ \frac{x^2}{2} \right]_0^{10} \left[ \frac{y^2}{2} \right]_0^5 \\ &= 50 \times \frac{25}{2} = \frac{(25)^2}{2} = \underline{\underline{625}} \end{aligned}$$



$$\begin{aligned} M &= \iint m \, dA = \int_0^{10} \int_0^{x/2} xy \, dy \, dx \\ &= \int_0^{10} \left[ \frac{xy^2}{2} \right]_0^{x/2} dx \\ &= \int_0^{10} \frac{x^3}{8} dx \\ &= \left[ \frac{x^4}{32} \right]_0^{10} = \frac{1}{32} (10)^4 = \frac{1}{2} (5^4) = \frac{1}{2} (25)^2 \\ &= \underline{\underline{\frac{625}{2}}} \end{aligned}$$