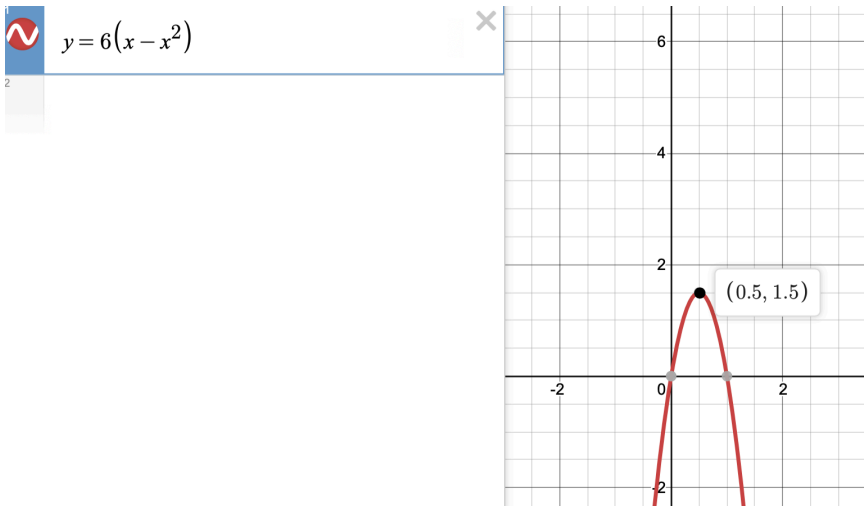
1.

$$\int f_x(x)dx = \int_{-inf}^{0} 0dx + \int_{1}^{+inf} 0dx + \int_{0}^{1} C(x-x^2) = C\int_{0}^{1}(x-x^2)dx \rightarrow \frac{1}{C} = \int_{0}^{1}(x-x^2)dx = \frac{1}{6} \rightarrow C = 6$$

2.

Max f(x) = 1,5

Max g(x) = 1 (poichè distribuzione uniforme[0,1])



M >= $\frac{1,5}{1}$

M= 1,5

3-4.