1. $\int\int_D (2x+1)dA, D : y = x^2 \wedge x + y = 2$

   - $-2 \leq x \leq 1$
   - $x^2 \leq y \leq 2 - x$

   Tipo 1

   $\int_{-2}^{1}(\int_{x^2}^{2-x} 2x + 1dy)dx$

   - $\int_{x^2}^{2-x} 2x + 1dy =$
     $2xy + y|_{x^2}^{2-x} =$
     $2x(2-x) + (2-x) - 2x(x^2) - x^2 =$
     $4x - 2x^2 + 2 - x - 2x^3 - x^2 =$
     $2x^3 - 3x^2 + 3x + 2$
   - $\int_{-2}^{1} 2x^3 - 3x^2 + 3x + 2dx =$
     $\frac{x^4}{2} - x^3 + \frac{3x^2}{2} + 2x\Big|_{-2}^{1} =$
     $\frac{1}{2} - 1 + \frac{3}{2} + 2 - 8 + 8 - 6 + 4 =$
     $2 - 1 + 2 - 6 + 4 = 1$

2. $\int\int\int_E xdV, E : z = e^{x^2}, z = -y, (x, y) \in R = [1, 2]x[0, 2]$ en el plano xy

   $\int_{1}^{2}(\int_{0}^{2}(\int_{e^{x^2}}^{-y} xdz)dy)dx$

   - $int_{e^{x^2}}^{-y} xdz =$
     $-xy - xe^{x^2}$
   - $\int_{0}^{2} -xy - xe^{x^2} dy =$
     $\frac{-xy^2}{2} - yxe^{x^2}\Big|_{0}^{2} =$
     $-2x - 2xe^{x^2}$
   - $\int_{1}^{2} -2x - 2xe^{x^2} dx =$
     $-x^2 - e^{x^2}\Big|_{1}^{2}$
     $-4 - e^4 + 1 + e =$
     $-3 + e(-e^3 + 1)$