1. $\int\int_D y^2 dA, D = \{(x,y) \in \mathbb{R}^2 : -1 \leq y \leq 1, -y-2 \leq x \leq y\}$
   D es una region tipo 2 y por fubini
   $\int_{-1}^{1}(\int_{-y-2}^{y} y^2 dx)dy$
   - $\int_{-y-2}^{y} y^2 dx =$
     $xy^2\big|_{-y-2}^{y} =$
     $y^3 - (-y-2)y^2 =$
     $y^3 + y^3 + 2y^2 =$
     $2y^3 + 2y^2$
   - $\int_{-1}^{1} 2y^3 + 2y^2 dy =$
     $\frac{y^4}{2} + \frac{2y^3}{3}\Big|_{-1}^{1} =$
     $\frac{1}{2} + \frac{2}{3} - \frac{1}{2} + \frac{2}{3} =$
     $\frac{4}{3}$
2. $\int\int_D \frac{y}{x^5+1} dA, D = \{(x,y) \in \mathbb{R}^2 : 0 \leq x \leq 1, 0 \leq y \leq x^2\}$
   D es una region tipo 1 y por fubini
   $= \int_0^1 (\int_0^{x^2} \frac{y}{x^5+1} dy)dx$
   - $\int_0^{x^2} \frac{y}{x^5+1} dy \overset{Barrow}{=}$
     $\frac{y^2}{2x^5+2}\Big|_0^{x^2} =$
     $\frac{x^4}{2x^5+2}$
   - $\int_0^1 \frac{x^4}{2x^5+2} dx =$
     $\int \frac{x^4}{2x^5+2} dx =$
     $u = x^5, du = 5x^4 dx, dx = \frac{du}{5x^4}$
     $\int \frac{1}{10u+10} du =$
     $\frac{\ln(u+1)}{10} =$
     $\int_0^1 \frac{\ln(x^5+1)}{10} \overset{barrow}{=}$
     $\frac{\ln(2)}{10} - \frac{\ln(1)}{10} = \frac{\ln(2)}{10}$