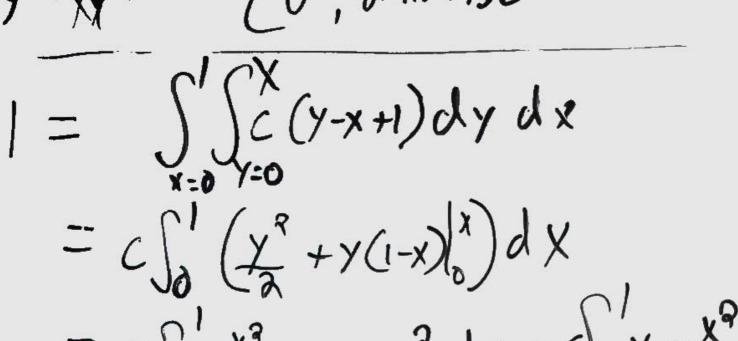
MECH 6325 HWY

$$\begin{array}{ll}
(1) & \text{ If } (1) &$$



$$= \int_{X=0}^{1} \int_{X=0}^{1} (y-x+1) dy dx$$

$$= c \int_{0}^{1} \left(\frac{y^{2}}{x^{2}} + y(1-x) \right)_{0}^{1} dx$$

$$= c \int_{0}^{1} \frac{x^{2}}{x^{2}} + x - x^{2} dx = c \int_{0}^{1} x - \frac{x^{2}}{x^{2}} dx$$

$$\int_{X=0}^{\infty} \int_{X=0}^{\infty} (y-x+1) dy dx$$

$$\int_{0}^{\infty} \left(\frac{y^{2}}{3} + y(1-x) \right)^{x} dx$$

 $= c\left(\frac{x^2}{3} - \frac{x^3}{6}\right)^3 = (\frac{1}{2} - \frac{7}{6})^3 = 1$

C = 3