

PÚ1 HAO33

$$\int_0^1 x \log x \, dx = \left[\frac{x^2}{2} \log x \right]_0^1 - \int_0^1 \frac{x}{2} dx = - \left[\frac{x^2}{4} \right]_0^1 = -\frac{1}{4}$$

0/1 Ud

$$\frac{x^2}{2} \quad \frac{1}{x}$$

$$\int_0^{+\infty} e^{-ax} \cos bx \, dx = \operatorname{Re} \int_0^{+\infty} e^{-ax} e^{ibx} \, dx = \operatorname{Re} \left[\frac{-1}{ib-a} \right] =$$

$$= \operatorname{Re} \frac{ib+a}{-b^2-a^2} = + \frac{a}{a^2+b^2}$$

$$\int_0^1 \frac{1}{\sqrt{x(1-x^2)}} \, dx$$

Problem 1. Dan 1.

$$0: x \sqrt{x} \Rightarrow K \quad \left. \vphantom{0:} \right\} \Rightarrow K$$

$$1: \frac{1}{\sqrt{1-x}} \Rightarrow K$$