ÇANKAYA UNIVERSITY

Department of Mathematics

Solve It

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Published Date: 15.12.2025

Deadline: 28.02.2026

Evaluate the integral

$$\int_0^\infty \frac{\sin x}{x} dx$$

by using the following steps:

1.

$$I(t) = \int_0^\infty e^{-tx} \frac{\sin x}{x} dx$$

2.

Find $\frac{d}{dt} I(t)$.

3.

Then find $I(t)$ and put $t = 0$.