Double Integrals over General Regions

Question

Determine which of the following integrals is equal to

$$\int_0^\pi \int_x^\pi \frac{\sin(y)}{y}\, dy dx.$$

A. $\displaystyle\int_0^\pi \int_0^x \frac{\sin(y)}{y}\, dx dy$ B. $\displaystyle\int_0^\pi \int_0^y \frac{\sin(y)}{y}\, dx dy$

C. $\displaystyle\int_0^\pi \int_y^\pi \frac{\sin(y)}{y}\, dx dy$ D. $\displaystyle\int_x^\pi \int_0^\pi \frac{\sin(y)}{y}\, dx dy$