



Question

Which of the following integral formulas is true?

A.
$$\int_a^b \int_c^d e^{x+y} dy dx = \int_a^b e^x dx \int_c^d e^y dy$$

B.
$$\int_a^b \int_c^d \cos(xy) dy dx = \int_a^b \cos(x) dx \int_c^d \cos(y) dy$$

C.
$$\int_a^b \int_c^d \sin(x+y) dy dx = \int_a^b \sin(x) dx \int_c^d \sin(y) dy$$

D.
$$\int_a^b \int_c^d \ln(x+y) dy dx = \int_a^b \ln(x) dx \int_c^d \ln(y) dy$$