

次の不定積分を計算せよ.

$$(1) \int x \sin x \, dx$$

$$(2) \int 4x \cos 2x \, dx$$

$$(3) \int x e^{2x} \, dx$$

$$(4) \int x \log x \, dx$$

$$(5) \int \log x \, dx$$

$$(6) \int e^x \sin x \, dx$$

$$(7) \int x \sin x^2 \, dx$$

$$(8) \int x^2 \sin x \, dx$$

$$(9) \int (2x^2 + 4) \cos x \, dx$$

$$(10) \int x e^{x^2} \, dx$$

$$(11) \int x^{\frac{1}{2}} \log x \, dx$$

$$(12) \int (8x^2 + 2x) \cos x \, dx$$

$$(13) \int e^{2x} \cos 3x \, dx$$

$$(14) \int (\log x)^2 \, dx$$

$$(15) \int x(\log x)^2 \, dx$$

$$(16) \int \log(2x + 1) \, dx$$

$$(17) \int (e^x + e^{-x})^2 (e^x - e^{-x}) \, dx$$

$$(18) \int 4x (e^x + e^{-x}) \, dx$$