

1 次の定積分を計算せよ。

(1)  $\int_{-1}^3 x^3 dx$

(2)  $\int_1^8 \frac{1}{\sqrt[3]{x^2}} dx$

(3)  $\int_0^4 \frac{1}{2x+1} dx$

(4)  $\int_1^4 \frac{2x+1}{x^2+x+1} dx$

(5)  $\int_{-1}^0 e^{-x} dx$

(6)  $\int_{2\pi}^{3\pi} \sin \frac{x}{6} dx$

(7)  $\int_0^{\frac{\pi}{3}} \tan x dx$  [Hint :  $\tan x = \frac{\sin x}{\cos x}$ ,  $a^{-1} = \frac{1}{a}$ ]

(8)  $\int_0^1 \frac{1}{\sqrt{4-x^2}} dx$

(9)  $\int_0^3 \frac{1}{\sqrt{x^2+16}} dx$

=====

(1) 20    (2) 3    (3)  $\log 3$     (4)  $\log 7$     (5)  $e-1$     (6) 3

(7)  $\log 2$     (8)  $\pi/6$     (9)  $\log 2$