

2 次の不定積分を求めよ。尚,  $C$  は積分定数とする。

(1)  $\int (5x+1)^7 dx$

(2)  $\int \frac{1}{\sqrt{4x-5}} dx$

(3)  $\int \frac{1}{3x+2} dx$

(4)  $\int \left( e^x + \frac{1}{e^x} \right)^2 dx$

(5)  $\int \cos 4x \sin x dx$

(6)  $\int \cos^2 x dx$

(7)  $\int (\sin x + \cos x)^2 dx$  [Hint :  $\sin^2 x + \cos^2 x = ?$ ,  $\sin x \cos x = ?$ ]

(8)  $\int \frac{x+1}{x^2+2x-3} dx$

(9)  $\int \frac{\cos x}{1+\sin x} dx$

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(1)  $\frac{1}{40}(5x+1)^8 + C$

(2)  $\frac{1}{2}\sqrt{4x-5} + C$

(3)  $\frac{1}{3}\log(3x+2) + C$

(4)  $\frac{1}{2}e^{2x} + 2x - \frac{1}{2}e^{-2x} + C$

(5)  $-\frac{1}{10}\cos 5x + \frac{1}{6}\cos 3x + C$

(6)  $\frac{1}{2}x + \frac{1}{4}\sin 2x + C$

(7)  $x - \frac{1}{2}\cos 2x + C$

(8)  $\frac{1}{2}\log(x^2 + 2x - 3) + C$

(9)  $\log(1 + \sin x) + C$