

微積分解法 2016 レポート 6回目.

①

問: 次の不定積分を求めなさい.

$$f(x) = (2x+1)^5$$

$$g(x) = \cos^2 x$$

$$\int f(x) dx = \frac{1}{\boxed{(1)}} (2x+1)^6 + \text{const.}$$

$$\int g(x) dx = \frac{1}{2} x + \frac{1}{\boxed{(2)}} \sin 2x + \text{const.}$$

Li⁰ - 6回目解答.

(2)

$$\boxed{(1)} = 12$$

$$\boxed{(2)} = 4$$

$$\int (2x+1)^5 dx = \frac{1}{12} \cdot (2x+1)^6 + \text{const.}$$

$$\int \cos^2 x dx$$

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

$$= \frac{1}{2} x + \frac{1}{4} \sin 2x + \text{const.}$$