

3 次の関数を微分せよ。

(1) $y = \log(x+5)$ $y' = \frac{1}{x+5}$

(2) $y = \log(2x+3)$ $y' = \frac{2}{2x+3}$

(3) $y = \log(x^2 - 2x + 3)$ $y' = \frac{2x-2}{x^2 - 2x + 3}$

(4) $y = (x+1)\log(x+1)$ $y' = 1 + \log(x+1)$

(5) $y = (3x-1)^2 \log(3x-1)$ $y' = 3(3x-1)\{2\log(3x-1) + 1\}$

(6) $y = \frac{\log(x+1)}{x+1}$ $y' = \frac{1 - \log(x+1)}{(x+1)^2}$

(7) $y = \frac{1}{\log x}$ $y' = -\frac{1}{x(\log x)^2}$

(8) $y = (x - \log x)^2$ $y' = \frac{2(x-1)(x - \log x)}{x}$