Subject

واجب الميد السنة الى فاتت

ثابت

① $F(X) = X^{-3} + X^5 + e^7$

$'F(X) = -3X^{-4} + 5X^4$

② $g(X) = \cos X \cdot \tan X$

$'g(X) = -\sin X \cdot \tan X + \sec^2 X \cdot \cos X$

③ $K(X) = \frac{\cos X}{\tan X}$

$'K(X) = \frac{-\sin X \cdot \tan X - \sec^2 X \cdot \cos X}{(\tan X)^2}$

④ $K(X) = \frac{\sin X}{\cos X}$

$K(X) = \tan X$

$'K(X) = \sec^2 X$

⑤ $F(X) = \ln\left(e^{(\sin X \cdot \sec X + 3X^{-3})^{-3}}\right)$

$'F(X) = \frac{\cos X \cdot \sec X + \tan X \cdot \sec X \cdot \cos X - 9X^{-4} * e^{(\sin X \cdot \sec X + 3X^{-3})}}{e^{(\sin X \cdot \sec X + 3X^{-3})}}$

⑥ $F(M) = \left(e^{(\cos X \cdot 4X^{-1})^6}\right)^2$

$'F(M) = 2\left(e^{(\cos X \cdot 4X^{-1})}\right) * -\sin X \cdot 4X^{-1} - 4X^{-2} \cdot \cos X * e^{(\cos X \cdot 4X^{-1})}$

⑦ $F(X) = \ln\left((X^5 - e^{X^3} + X^{-3})^{-1}\right)$

$'F(X) = \frac{5X^4 - 3X^2 e^{X^3} - 3X^{-4}}{X^5 - e^{X^3} + X^{-3}}$

Sat Sun Mon Tue Wed Thu Fri

Date / /
Subject

⑧ $F(X) = \dfrac{X^{-3} - X^3}{X + X^{-3}}$

$$F'(X) = \frac{(-3X^{-4} - 3X^4)(X + X^{-3}) - (1 - 3X^{-4})(X^{-3} - X^3)}{(X + X^{-3})^2}$$

⑨ $F(X) = \dfrac{e^{X^2+X}}{\ln(X^2 - X^{-2})}$

$$F'(X) = \frac{2X+1\, e^{X^2+X}(\ln(X^2 - X^{-2})) - \left(\frac{2X + 2X^{-3}}{X^2 - X^{-2}}\right) * e^{X^2+X}}{(\ln(X^2 - X^{-2}))^2}$$

⑩ $g(X) = \csc X^3$

$g'(X) = 3X^2 \csc X \cdot \cot X$

⑪ $g(X) = \csc X^2$

$g'(X) = 2X \csc X^2 \cdot \cot X^2$

نشتق الزاوية مرة واحدة فقط