

1)

$$9) \cos x \cdot \cos x \neq \sin x \cdot \sin x = \cos^2 x - \sin^2 x = \underline{\cos 2x}$$

$$8) \frac{3 \ln(2x+1)^3}{2x+1} \cdot \frac{1}{(2x+1)^3} \cdot 3(2x+1)^2 = \underline{\frac{3}{2x+1}}$$

$$9) \sin(\ln x^3)' = \cos(\ln x^3) \cdot \frac{1}{x^3} \cdot 3x^2 = \underline{\cos(\ln x^3) \cdot \frac{3}{x}}$$

$$4) \frac{6x^3 \cdot \ln x - x^9/x}{\ln^2 x} = \underline{\frac{x^3 (4 \ln x - 1)}{\ln^2 x}}$$

$$2) -\sin(x^2+3x) \cdot (2x+3) = \underline{-\sin(\pi+3\sqrt{\pi})(2\sqrt{\pi}+3)}$$

$$3) \frac{(3x^2-2x-1)(1+2x+3x^2-4x^3) - (x^3-x^2-x-1)(2+6x-12x^2)}{(1+2x+3x^2-4x^3)^2}$$

$$\frac{-2 \cdot 1 - (-1) \cdot 2}{1} = 2 - 1 = \underline{1}$$

$$4) \left((3x)^{1/2} \cdot \ln x \right)' = \frac{1}{2} (3x)^{-1/2} \cdot \ln x + \frac{(3x)^{1/2}}{x} = \frac{\ln x}{2\sqrt{3x}} + \frac{\sqrt{3x}}{x} = 0 + \sqrt{3} =$$

$$\frac{\sqrt{3x} \cdot \ln x + 3x}{6x} + \frac{3x}{x\sqrt{3x}}$$

$$\operatorname{tg} \alpha \rightarrow \underline{\sqrt{3}}$$

$$\alpha = \arctg(u) \rightarrow \underline{60^\circ}$$