

4.2

ketjusääntö

$$D(u(s(x))) \\ = \underline{u'(s(x))} \cdot \underline{s'(x)}$$

$$\underline{E1} \quad D(x^3+1)^4 \\ = 4(x^3+1)^3 \cdot 3x^2 \\ = 12x^2(x^3+1)^3$$

$$\underline{E2} \quad D(\sin 2x) \\ = \cos 2x \cdot 2 \\ = 2 \cos 2x$$

$$\sin 2x \\ (x^3+1)^4$$

$$s(x) = x^3 + 1 \\ s'(x) = 3x^2 \\ u(x) = x^4 \\ \quad \quad \quad \uparrow s(x) \\ u'(x) = 4x^3$$

$$s(x) = 2x \\ s'(x) = 2 \\ u(x) = \sin x \\ u'(x) = \cos x$$