

$$\begin{aligned} J(x) &= f(g(x)) & J'(1) \\ J'(x) &= f'(g(x)) \cdot g'(x) \\ &= f'(g(1)) \cdot g'(1) \\ &= f'(-0.7) \cdot -1 \\ &= -\frac{3}{2} \cdot -1 = 1.5 \end{aligned}$$

$$\begin{aligned} X^2 &= e^{2 \ln X} \\ \left(e^{\ln x} \right)^{x^2} &= e^{x^2 \ln x} \\ &= e^{x^2 \ln x} \left(2x \ln x + \frac{x^2}{x} \right) = e^{x^2 \ln x} (2x \ln x + x) \\ &= \left(e^{\ln x} \right)^{x^2} (2x \ln x + x) = x^{x^2} (2x \ln x + x) \end{aligned}$$

$$x = e^{\ln x}$$

$$\frac{d}{dx} e^{x^2 \ln x}$$