

$$\sin(2-5x^2) = \frac{d}{dx} \sin(2-5x^2) = \cos(2-5x^2) \cdot -10x$$

$$(x-3)e^x = (x-3)\frac{d}{dx}e^x + e^x\frac{d}{dx}(x-3) = (x-3)e^x + e^x \cdot 1$$

$$\sin(2-5x^2) = \cos(2-5x^2) (-10x)$$

$$\begin{aligned} b(x) &= \frac{x^2+4}{x^2-1} \\ &= \frac{(x^2-1)2x - (x^2+4)2x}{(x^2-1)^2} \\ &= \frac{-10x}{(x^2-1)^2} \end{aligned}$$