

# Differentiator

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$$\begin{aligned} & \frac{-3}{(5-x^{(x \cdot (3-x^2))})} \\ & \frac{-3}{(5-x^{(x \cdot (3-x^2))})} \\ & (x)' = 1 \\ & (x)' = 1 \\ & (x^2)' = 2 \cdot x^{(2-1)} \cdot 1 = 2 \cdot x \\ & (3)' = 0 \\ & (3-x^2)' = 0 - 2 \cdot x = -1 \cdot 2 \cdot x \\ & (x)' = 1 \\ & (x \cdot (3-x^2))' = 1 \cdot (3-x^2) + x \cdot -1 \cdot 2 \cdot x = 3-x^2 + x \cdot -1 \cdot 2 \cdot x \\ & (x^{(x \cdot (3-x^2))})' = x^{(x \cdot (3-x^2))} \cdot ((3-x^2+x \cdot -1 \cdot 2 \cdot x) \cdot \ln(x) + \frac{1}{x} \cdot x \cdot (3-x^2)) \\ & (5)' = 0 \\ & (5-x^{(x \cdot (3-x^2))})' = 0 - x^{(x \cdot (3-x^2))} \cdot ((3-x^2+x \cdot -1 \cdot 2 \cdot x) \cdot \ln(x) + \frac{1}{x} \cdot x \cdot (3-x^2)) = -1 \cdot x^{(x \cdot (3-x^2))} \cdot ((3-x^2+x \cdot -1 \cdot 2 \cdot x) \cdot \ln(x) + \frac{1}{x} \cdot x \cdot (3-x^2)) \\ & (-3)' = 0 \\ & (\frac{-3}{(5-x^{(x \cdot (3-x^2))})})' = \frac{(0 \cdot (5-x^{(x \cdot (3-x^2))}) - 3 \cdot -1 \cdot x^{(x \cdot (3-x^2))} \cdot ((3-x^2+x \cdot -1 \cdot 2 \cdot x) \cdot \ln(x) + \frac{1}{x} \cdot x \cdot (3-x^2)))}{(5-x^{(x \cdot (3-x^2))})^2} = \frac{-1 \cdot -3 \cdot -1 \cdot x^{(x \cdot (3-x^2))} \cdot ((3-x^2+x \cdot -1 \cdot 2 \cdot x) \cdot \ln(x) + \frac{1}{x} \cdot x \cdot (3-x^2))}{(5-x^{(x \cdot (3-x^2))})^2} \\ & \frac{-1 \cdot -3 \cdot -1 \cdot x^{(x \cdot (3-x^2))} \cdot ((3-x^2+x \cdot -1 \cdot 2 \cdot x) \cdot \ln(x) + \frac{1}{x} \cdot x \cdot (3-x^2))}{(5-x^{(x \cdot (3-x^2))})^2} \end{aligned}$$