

**Exercise 16**

Find the derivative of the function.

$$g(x) = e^{x^2-x}$$

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**Solution**

Take the derivative using the chain rule.

$$\begin{aligned}g'(x) &= \frac{dg}{dx} = \frac{d}{dx}(e^{x^2-x}) \\&= e^{x^2-x} \cdot \frac{d}{dx}(x^2 - x) \\&= e^{x^2-x} \cdot (2x - 1) \\&= (2x - 1)e^{x^2-x}\end{aligned}$$