

Зад 6, задание 3

$$y = (x^2 + 2)^5 \cdot (3x - x^3)^3 \rightarrow 5 \ln(x^2 + 2) + 3 \ln(3x - x^3)$$

$$\frac{y'}{y} = \frac{5 \cdot 2x}{x^2 + 2} + \frac{3 \cdot (3x - x^3)'}{3x - x^3}$$

$$y' = y \cdot \left(\frac{10x}{x^2 + 2} + \frac{9(1 - x^2)}{3x - x^3} \right)$$

$$y' = (x^2 + 2)^5 (3x - x^3)^3 \cdot \left(\frac{10x}{x^2 + 2} + \frac{9(1 - x^2)}{3x - x^3} \right)$$