

task/1827036

$$1) y = -x^3 + 0,5x^2 - x + 1$$

$$y' = -3x^2 + x - 1$$

$$2) y = -3\cos x \cdot (x^2 + 2)$$

$$y' = (-3\cos x)'(x^2 + 2) - 3\cos x(x^2 + 2)' = \\ = 3\sin x(x^2 + 2) - 6x\cos x$$

$$3) y = \frac{1}{\sqrt{x}}$$

$$y' = \left(\frac{1}{\sqrt{x}}\right)' = (x^{-\frac{1}{2}})' = -\frac{1}{2}x^{-\frac{3}{2}} = -\frac{1}{2x\sqrt{x}}$$

$$4) y = \frac{1}{\sin x}$$

$$y' = \left(\frac{1}{\sin x}\right)' (\sin x)' = -\frac{\cos x}{\sin^2 x} = -\frac{\operatorname{ctg} x}{\sin x}$$

$$5) y = \frac{x^4}{3-x}$$

$$y' = \frac{(x^4)'(3-x) - x^4(3-x)'}{(3-x)^2} = \frac{4x^3(3-x) + x^4}{(3-x)^2}$$

$$6) y = x^2 + \operatorname{ctg} x$$

$$y' = 2x - \frac{1}{\sin^2 x}$$

Извини, если что не так