

## Вариант № 0

1.  $y = \frac{1}{x} \operatorname{arctg} 5x^3 + \sqrt{1-6x}$

2.  $y = \operatorname{tg}^4 \frac{x}{2} + \ln \arccos \frac{2}{x}$

3.  $y = 4^{\sqrt{2x^5 - \sin^2 3x}}$

4.  $y = \frac{5 \cos x^4}{\sin 6x} + \frac{3}{\sqrt[3]{7x}}$

5.  $y = \log_8^2 \left( \frac{8}{9x} + \operatorname{arctg} \sqrt{x} \right)$

6.  $x^2 y + 5y^2 \sin x = \frac{y}{x}$

7.  $\begin{cases} x = 2 \cos^3 4t \\ y = t^2 \sin^4 t \end{cases}$

8.  $y = (\ln 5x)^{2x^2+4x+5}$

9.  $f(x) = x^2 e^{-x}, x_0 = 0$

10.  $w = (ab^2 + 4xa^2)e^{ab} + \frac{x}{ab}$   
 $w'(a) = ?$