

$$\begin{cases} 1 = a \cdot 1 + b \\ a = \frac{1}{2} \end{cases}$$

$$1 = \frac{1}{2} \cdot 1 + b$$

$$b = \frac{1}{2}$$

ответ: уравнение касательной к графику $y = \frac{1}{2}x + \frac{1}{2}$

Задача № 7

$$\begin{aligned} 1) (\cos(\sin x^2))' &= (\sin x^2)' \cdot \cos'(\sin x^2) = \\ &= (\sin(x^2))' \cdot (-\sin(\sin(x^2))) = (x^2)' \cdot \cos(x^2) \cdot (-\sin(\sin(x^2))) = \\ &= \cancel{(x^2)'} = -2 \cdot x \cdot \cos x^2 \cdot \sin(\sin x^2) \end{aligned}$$

$$\begin{aligned} 2) (\cos(\sin^2 x))' &= (\sin^2 x)' \cdot -\sin(\sin^2 x) = \\ &= -\cos x \cdot 2 \sin x \cdot \sin(\sin^2 x) = \\ &= -2 \cos x \cdot \sin x \cdot \sin(\sin^2 x) \end{aligned}$$

$$\begin{aligned} 3) ((\cos(x))^{\sin(x)})' &= ((e^{\ln \cos x})^{\sin x})' = (e^{\ln \cos x \cdot \sin x})' = \\ &= (\ln \cos(x) \cdot \sin(x))' \cdot (e(x))' (\ln \cos(x) \cdot \sin(x)) = \\ &= (\ln \cos(x) \cdot \sin(x))' \cdot e^{\ln \cos(x) \cdot \sin(x)} = \end{aligned}$$