

[2.1] Найдите производную:

$$\begin{aligned}(\sin(2x+1))' &= \sin'(2x+1) (2x+1)' = \cos'(2x+1) ((2x)' + (1)') = \\&= \cos(2x+1) (2+0) = \cos(2x+1) \cdot 2 = \\&= 2 \cos(2x+1)\end{aligned}$$

Ответ:

$$\boxed{(\sin(2x+1))' = 2 \cos(2x+1)}$$

[2.2] Найдите производную:

$$\begin{aligned}(\sin(x^2+2x+1))' &= \sin'(x^2+2x+1) (x^2+2x+1)' = \cos'(x^2+2x+1) ((x^2)' + (2x)' + (1)') = \\&= \cos(x^2+2x+1) (2x+2+0) = \cos(x^2+2x+1) (2x+2) = \\&= 2(x+1) \cos(x^2+2x+1)\end{aligned}$$

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

Ответ:

$$\boxed{(\sin(x^2+2x+1))' = 2(x+1) \cos(x^2+2x+1)}$$