

$$f(x) = e^x : [a, b] = [0, 1]$$

$$\int_0^1 e^x dx = e^x \Big|_0^1 = e^1 - e^0 = e - 1$$

$$\begin{array}{c} \bullet \quad \bullet \quad \bullet \quad \bullet \quad \bullet \\ x_0 \quad x_1 \quad x_2 \quad x_3 \quad x_4 \end{array}$$

$n=4 \Rightarrow 4$ интервала \Rightarrow
 $\Rightarrow 5$ точек

$$S_n = 1,7197134914 \Big|$$

$$n=10$$

$$\Rightarrow \log_2 \frac{|I - S_n|}{|I - S_{n/2}|} \approx 1,99982$$

$$S_{n/2} = 1,7186297889 \Big|$$

$$n=20$$

$$S_n \underset{n=100}{=} 1,7182961475$$

$$S_{n/2} \underset{n=200}{=} 1,7182854082$$

$$\Rightarrow \log_2 \frac{|I - S_n|}{|I - S_{n/2}|} \approx 2,00001$$