

עקר מרכז

$$1) \lim_{x \rightarrow 0} \frac{\sin x}{x} = 1$$

$$2) \lim_{x \rightarrow \infty} \left(1 + \frac{1}{x}\right)^x = e = \lim_{\alpha \rightarrow 0} \left(1 + \alpha\right)^{\frac{1}{\alpha}} = e$$

$$3) \lim_{x \rightarrow 0} \frac{\log(1+x)}{x} = \log_a e \quad (a > 0, a \neq 1)$$

$$4) \lim_{x \rightarrow 0} \frac{\ln(1+x)}{x} = 1$$

$$5) \lim_{x \rightarrow 0} \frac{a^x - 1}{x} = \ln a \quad (a > 0)$$

$$6) \lim_{x \rightarrow 0} \frac{(1+x)^\alpha - 1}{x} = \alpha$$