



Problem:

Give the definition of the one-sided limit in the language $\varepsilon - \delta$.

Solution:

$$\lim_{x \rightarrow 3+0} f(x) = -\infty.$$

Let's give the definition of this one-sided limit in the language $\varepsilon - \delta$.

$$\forall M \in \mathbb{R}, \exists \delta > 0, \forall x \in (3; 3 + \delta) \text{ i. e. } (0 < x - 3 < \delta) \Rightarrow f(x) < M.$$