



Math for the people, by the people.

converges uniformly

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Let  $X$  be a set,  $(Y, \rho)$  a metric space and  $\{f_n\}$  a sequence of functions from  $X$  to  $Y$ , and  $f: X \rightarrow Y$  another function.

If for every  $\varepsilon > 0$  there exists an integer  $N$  such that

$$\rho(f_n(x), f(x)) < \varepsilon$$

for all  $x \in X$  and all  $n > N$ , then we say that  $f_n$  *converges uniformly* to  $f$ .