

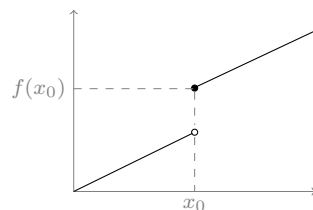
A function  $f$  is right-continuous at  $x_0$  if

$$\lim_{x \rightarrow (x_0)^+} f(x) = f(x_0).$$

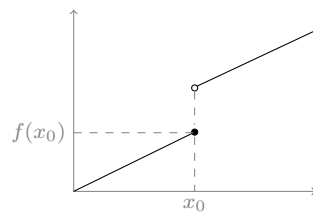
It is left-continuous at  $x_0$  if

$$\lim_{x \rightarrow (x_0)^-} f(x) = f(x_0).$$

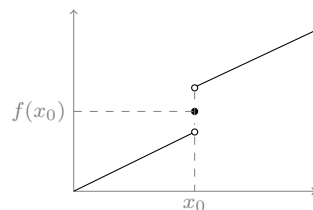
This is illustrated in the examples given below.



A right-continuous function at  $x_0$  (not left-continuous).



A left-continuous function at  $x_0$  (not right-continuous).



This function is discontinuous at  $x_0$  (it is neither left- nor right-continuous at  $x_0$ ).