

```

white,
colti-
tle=white,
col-
back-
ti-
tle=definitiontitle,
ti-
tle=Definition
},
over-
lay
un-
bro-
ken
and
first=
[an-
chor=west,
font=,
text=definitionborder,
xshift=10pt,
yshift=-
8pt]
at
(frame.north
west)
.
i
1

```

Continuous Function A function  $f : X \rightarrow Y$  between topological spaces is said to be **continuous** if for every open  $s$  in  $Y$ ,  $f^{-1}(s)$  is open in  $X$ . Equivalently, a function  $f : R \rightarrow R$  is continuous at a point  $c$  if for every  $\varepsilon > 0$ , there exists a  $\delta > 0$  such that  $|f(x) - f(c)| < \varepsilon$  whenever  $|x - c| < \delta$ .