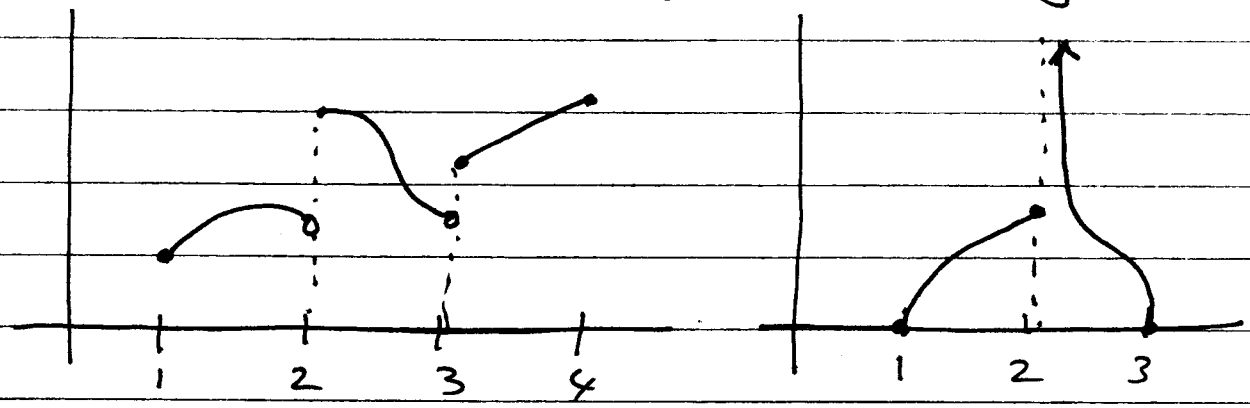
Definition A function $f(t)$ is **piecewise continuous** on a finite interval $[a,b]$ if it is continuous at every point in $[a,b]$ except for possibly a finite number of points at which $f(t)$ has a jump discontinuity.



piecewise CTS not piecewise CTS

$f(t)$ is **piecewise continuous** on $[0,\infty)$ if it is piecewise continuous on $[0,N]$ for each $N>0$.

Definition A function $f(t)$ is of **exponential order** α if there are constants M, T:

$$|f(t)| \leq M e^{\alpha t} \quad \text{for all } t \geq T$$

or

$$\left|\frac{f(t)}{e^{\alpha t}}\right| \leq M \quad \text{for all } t \geq T.$$