

$$-L \leq x \leq L$$

f piecewise smooth $\leftarrow$ May have jumps



Thm Fourier series $\bar{f}(x) = f(x)$ on $|x| < L \Leftrightarrow f(x)$ is continuous (no jumps)
with $\bar{f}$ continuous (no jumps) and $f(-L) = f(L)$