

Lecture 6

Thursday, October 6, 2022 8:31 AM

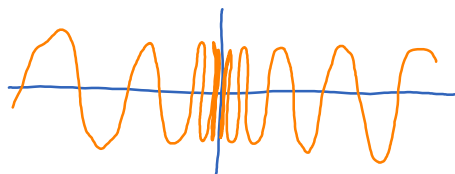
* Questions

To show that limit doesn't exist:

- Use rough estimates
- Use graph
- show that the left limit and the right limit don't agree or one of them doesn't exist.

Ex

$$\sin \frac{1}{x}$$



$$\sin \frac{1}{x} = 1 \quad \text{if} \quad \frac{1}{x} = \frac{\pi}{2} + k2\pi \quad \longleftrightarrow \quad x = \frac{1}{\frac{\pi}{2} + k2\pi}$$

$$\sin \frac{1}{x} = 0 \quad \text{if} \quad \frac{1}{x} = \pi + k2\pi \quad \longleftrightarrow \quad x = \frac{1}{\pi + k2\pi}$$