

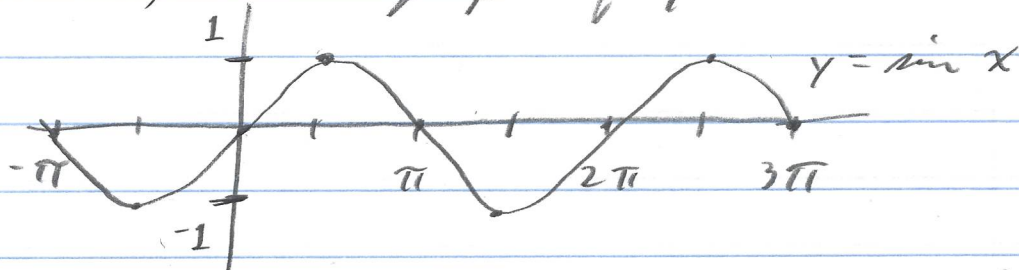
1.3#29

Graph $y = \sin x$ and $y = \lfloor \sin x \rfloor$.

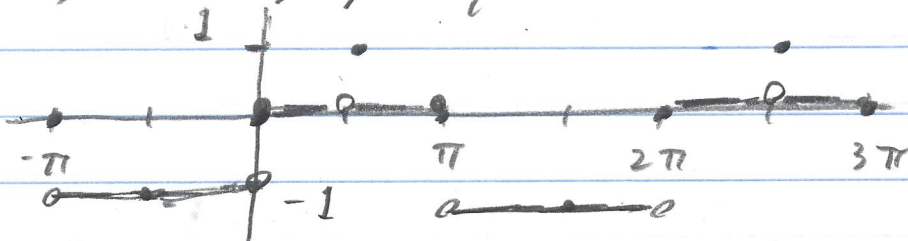
What are domain and range of $\lfloor \sin x \rfloor$?

Solution

Well, the graph of $y = \sin x$ is



Next, let's graph $y = \lfloor \sin x \rfloor$. We have



So the domain of $\lfloor \sin x \rfloor$ is $x \in \mathbb{R}$.

So the range of $\lfloor \sin x \rfloor$ is $\{-1, 0, 1\}$.

□