

3.3.2. Domain and Range of trigonometric functions

(a) Domain and Range of $\sin x$ and $\cos x$.

$y = \sin x$ and $y = \cos x$ are defined for all real values of x .

\therefore Domain of the functions $y = \sin x$ and $y = \cos x$ is the set \mathbb{R} of real numbers.

Also $-1 \leq \sin x \leq 1$ and $-1 \leq \cos x \leq 1$.

\therefore Range of the functions $y = \sin x$ and $y = \cos x$ is $[-1, 1]$.