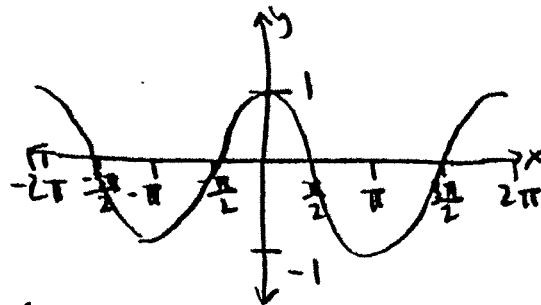


10. a. Sketch the graph of $y = \cos x$ for $-2\pi \leq x \leq 2\pi$. Use a scale of $\pi/2$ on the x -axis and a scale of 1 on the y -axis.



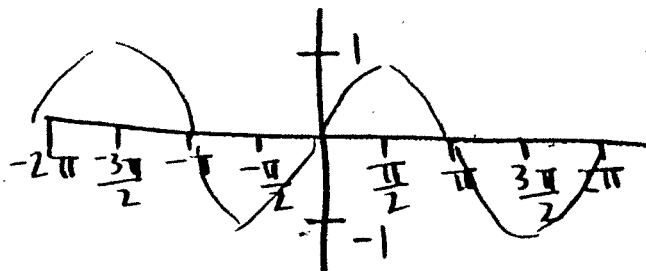
- b. Using the graph explain why the following statement is true.

$$\cos(-x) = \cos x$$

The graph of cosine is the same in both where x is positive

and where x is negative, so the values will be the same. You know this because the

- c. Sketch the graph of $y = \sin x$ for $-2\pi \leq x \leq 2\pi$. Use a scale of $\pi/2$ on the x -axis and a scale of 1 on the y -axis.



Graph is Symmetrical around the y -axis

- d. Use the graph to decide if $\sin(-x) = \sin x$ is a true statement? Explain why or why not and write a statement about $\sin(-x)$ that is true.

$\sin(-x) = \sin x$ is not a true statement because the graph is not symmetrical

around the y -axis; in order for this to be true, the graphs must be symmetrical in

this way, like $y = \cos x$. $\sin(-x) = -(\sin x)$

because if you were to reflect $y = \sin x$ over the y -axis, it would map out to be the exact opposite of $y = \sin(-x)$, showing that the values above the x -axis were positive and below the x -axis were negative.