

Refer to the $30^\circ - 60^\circ - 90^\circ$ triangle. From there you can see that $\cos 30^\circ = \frac{\sqrt{3}}{2}$. It follows that $x = 30^\circ$. So

$$\cot x = \cot 30^\circ = \frac{\sqrt{3}}{1} = \sqrt{3}.$$