You may have realized that the smallest positive value of *x* where $y = \cos\left(\frac{1}{2}x\right)$ is at its maximum is at the end of one cycle, but gave the answer for the function $y = \cos x$. The value of *x* at that point is the length of one cycle, or one period of $y = \cos\left(\frac{1}{2}x\right)$.