You may have correctly determined that the reference angle is $60°$ and then confused secant with cosecant. To find the correct value of $\sec 120°$ you must find the value of $\sec 60°$ and then determine the correct sign. To determine the correct sign, use the signs of x and y in the second quadrant, remembering that $\sec \theta = \dfrac{1}{x}$. The correct answer is -2.