4.a)To estimate the limit lim x→0 (1+x)^1/x, we try evaluating the function for values of x close to zero, such as x=0.1,0.01,−0.1,−0.01, and observe what value it seems to approach.

However, this limit is known to converge to a familiar constant: **Euler's number e**, which is approximately **2.71828**. So, the limit should approach this value as xxx gets very close to zero.