The amount of time that a customer spends waiting at an airport check-in counter is a random variable with mean 8.2 minutes and standard deviation 1.5 minutes. Suppose that a random sample of $n = 49$ customers is observed. Find the probability that the average time waiting in line for these customers is between 8 and 9 minutes.

\[
\mu_x = 8.2, \sigma_x = \frac{1.5}{\sqrt{49}} = .214
\]

\[
P(8 < \bar{x} < 9) = P\left( \frac{8 - 8.2}{.214} < Z < \frac{9 - 8.2}{.214} \right) = P(-.93 < Z < 3.7)
\]

\[
= 1 - .1762 = .8238
\]

normal cdf(8,9,8.2,.214)=.8249