



M3-06: Bayes Rule

Part of the "Prediction and Probability" Learning Badge

Video Walkthrough: <https://discovery.cs.illinois.edu/m3-06/>

Bayes Rule Puzzles

Puzzle #1: Consider the following table of the survival rate and life expectancy in a certain population at birth:

	A=55	A=60	A=65	A=70
Survival, P(A):	0.90	0.85	0.75	0.65

What is the probability of a 60 years old to reach the age of 65?

Puzzle #2: The University of Illinois developed a saliva test that is convenient, repeatable, and large-scale to use as a key weapon to help control the COVID-19 pandemic. They released a paper in 2020 with data from the saliva test! During the time of this analysis, 9% of students actually had COVID. 89% of people with COVID-19 will correctly test positive. However, 1% of people without COVID-19 will also test positive. This is called a false positive.

What is the probability that someone actually has COVID, given they received a positive test result?