

1. Question — Please name the bias (if any) in the following scenarios:
  1. Average household income at the neurosurgeon's Christmas party represents the overall average income
  2. Three college dropouts became billionaires (Steve Jobs, Bill Gates, Mark Zuckerberg) → Dropping out will make me a billionaire Survivorship
  3. Our competitor has a new online presence and their sales increased by 50%
  4. You are implementing a new app and ask your close relatives for feedback
  
2. Question — A dice (1-6) is thrown 10 times and the sum of the 10 rolls is noted.
  1. What is the expected sum?
  2. What is the distribution?
  3. If you repeat this game 10,000 times and note the sum each time, what is the distribution of the sums?
  4. What distribution should you consider if you repeat this game only 15 times?
  5. How many degrees of freedom exist?