

C3 We Just Boolean

Colab 7A

Thought Process

- Very vague
- Send 100 at a time?
- What type of test can we use?
- Random sample?
- No because high chance you won't find
- Is there anything to help distinguish the bad vaccine from the good?
- How many tests can Jonathan do at once?
- How long do the tests take?
- If 99% are effective and one is tainted, then more than 1 vaccine is ineffective
- Reorganize the information as a single strategy
- how do we get Top and Josh back from vacation?
- Send 51% of the vaccines, so there's a slight advantage in probability of finding it
- Send 250 each, $\frac{1}{4}$ chance in 4 shipments, so 250x time per shipment
- Send 100 each, $\frac{1}{10}$ chance in 10 shipments, so 100x time per shipment
- Send 500 each, $\frac{1}{2}$ chance in 2 shipments, so 500x time per shipment
- How far away is Jonathan's facility?
- Could mix some vaccines to lower amount, and then send off
- Send half each time (500,250,125,62,...)

Answer: Send half of the bottles each time until the batch with the vaccine is discovered (500,250,125, and so on)