

Critical Thinking GEA 101

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You've gone to war to fight al Qaeda in Afghanistan. Your military has offered to pay a bounty of \$1,000 USD to anyone who turns in an Al Qaeda member.

Many of the locals are sympathetic with the fight against al Qaeda, though many are also sympathetic with your enemies.

You estimate: If someone is al Qaeda, then there's a 5% chance someone will turn them in.

It's not too likely that you'll get non al Qaeda members turned in. However, \$1,000 USD is a lot of money, and sometimes people will turn in non al Qaeda member, just to receive the bounty. \$1,000 USD will feed, clothe, and house an Afghani for months. Also, sometimes people will turn in someone who is non al Qaeda, just because they don't like that person, and want you to take them away.

You estimate: If someone is not al Qaeda, there's a 1 in one million chance that they get turned in for the bounty. (Probability = 0.0001%).

You also know that there are only 100 al Qaeda in all of Afghanistan (the number is actually smaller <http://abcnews.go.com/blogs/politics/2010/06/cia-at-most-50100-al-qaeda-in-afghanistan/>, but let's assume it's 100), and that the population of Afghanistan is around 35 million.

Question #1

How many people who are members of al Qaeda will get turned in if your estimates are correct? _____

Question #2

How many people who are NOT members of al Qaeda will get turned in if your estimates are correct? _____

Question #3

How many people total will get turned in if your estimates are correct?

Question #4

What is the percentage of people who are members of al Qaeda out of the total number of people who get turned in? _____

Question #5

Should we imprison the people who get turned in? Should we let them go? Should we investigate them more? What should we do?