Stat 140 Probability Examples

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Polling

Opinion polling organizations contact their respondents by sampling random telephone numbers. According to the Pew Research Center, as of 2012, interviewers were able to reach about 62% of all US households. Among those contacted, about 14% agreed to participate in surveys.

1. What is the probability that the next household on the list will be contacted but will refuse to cooperate?

2. What is the probability that for the next household on the list, the interviewer will either not be able to contact the household, or they will contact the household but noone in the household will agree to participate in the survey?

3. What is the probability that the next household on the list will agree to participate in the survey?

Blood Types

The American Red Cross says that about 45% of the US Population has Type O blood, 40% has Type A blood, 11% has Type B blook, and the rest have Type AB blook.

1. Someone volunteers to give blood. What is the probability that this donor

(a) Has Type AB blood?

(b) Has Type A or Type B blood?

2. Among four potential blood donors, what is the probability that

(a) All are Type O?

(b) No one is Type AB?

(c) They are not all Type A?