Exercise for Week 3

ⓘ This is a preview of the published version of the quiz

Started: 4 Sep at 16:41

Quiz instructions

Quiz time is from 09:15am to 10:30am of August 23.

Question 1 — 1 pts

Let A, B, C be events of the sample space S. Suppose $P(A) = P(B) = 0.3$, $P(C) = 0.4$. Which of the following is INCORRECT?

- ○ $P(A \cup B) \leq 0.6$
- ○ $P(A \cap C) \leq 0.3$
- ○ $P(A) + P(B) + P(C) = 1$. So $A \cup B \cup C = S$.
- ○ All of the above options are correct.

Question 2 — 1 pts

Let A, B be events of a sample space. $P(A) = 0.4$; $P(B) = 0.3$; $P(B|A) = 0.5$. Then $P(A|B) =?$

- ○ 1/3
- ○ 2/3
- ○ 1/2
- ○ Not computable based on the available information.

Question 3

1 pts

Let A and B be events, such that $P(A \cup B) = P(A) + P(B)$. Which of the following statement must be TRUE?

- ◯ If A and B are independent, then we must have "$P(A) = 0$ or $P(B) = 0$".
- ◯ It is impossible that $A = B$.
- ◯ If $A \subset B$, we may have $P(B) = 0.1$.
- ◯ All of the above options are incorrect.

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