STA107 Summer Test 1 Solutions

Danny Huong

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Question 1: (20 points). Answer the following with **TRUE** or **FALSE**.

1. When throwing a die, the event "the outcome is a multiple of 3" is an elementary outcome.

   Solution:

   This is false. Recall an elementary event is an event which contains only a single outcome in the sample space. Notice that the event "the outcome is a multiple of 3" contains outcomes 3 and 6, so the event $\{3, 6\}$ is not elementary.

   □

2. For two events A and B in a sample space, the probability that at least one of them occurs is $P(A \cup B)$.