

Mathematics 1550H – Probability I: Introduction to Probability

TRENT UNIVERSITY, Summer 2023 (S62)

Quiz #1

Alia iacta est.[†]

Due just before midnight on Thursday, 22 June.*

A fair six-sided die with faces numbered 1 through 6 is rolled twice and the number that comes up on each roll is recorded.

1. What is the sample space for this experiment? *[1]*
2. What is the probability function for this experiment? *[1]*
3. What are the probabilities of each of the following possible events for this experiment?
 - a. The sum of the numbers that come up on the two rolls is 8. *[1]*
 - b. The difference between the numbers that come up on the first and second rolls has absolute value ≤ 1 . *[1]*
 - c. The number that came up on the first roll is odd and the number that came up on the second role is even. *[1]*

[†] “The die is cast.” Attributed to Gaius Julius Caesar when his army crossed the Rubicon river from Cisalpine Gaul into Roman Italy proper, setting off a civil war.

* You should submit your solutions via Blackboard’s Assignments module, preferably as a single pdf. If this fails, you may submit your work to the instructor on paper or by email to sbilaniuk@trentu.ca.