

# DATA 605 - Discussion 5

*Joshua Sturm*

*03/02/2018*

Section 1.2, exercise 2, page 35

**Give a possible sample space  $\Omega$  for each of the following experiments:**

- An election decides between two candidates A and B.
  - A two-sided coin is tossed.
  - A student is asked for the month of the year and the day of the week on which her birthday falls.
  - A student is chosen at random from a class of ten students.
  - You receive a grade in this course.
- (a) Since there are only two options, the sample space is  $\Omega = \{A, B\}$ .
- (b) Like in part (a), there are only two possible outcomes, so the sample space is  $\Omega = \{\text{heads}, \text{tails}\}$ .
- (c) There are 12 possibilities for the month, and 7 possibilities for the day, so  $\Omega = \{1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12\} \times \{S, M, T, W, Tr, F, Sa\}$ .
- (d) There are 10 possible students, so  $\Omega = \{1, 2, 3, 4, 5, 6, 7, 8, 9, 10\}$ .
- (e) Assuming the only whole letter grades,  $\Omega = \{A, B, C, D, F\}$ .