

STAT 215C – Homework 2

Due February 4

Instructions:

Please include the following information on the first page of your completed homework.

- Name
- STAT 215
- Homework 2
- Due date
- List of students you worked with (if applicable)

Please remember to show your work and explain answers as necessary. Answers that are not supported by good reasoning will not receive full credit. Homework should be stapled if it is longer than one page.

Section 2.1: 4, 8(a-d)

Blood Types. Every person has a blood type that is either A, B, AB, or O. In addition, each individual either has a Rhesus (Rh) factor (+) or does not (-). A medical technician records a person's blood type and Rh factor. List the sample space \mathcal{S} for this experiment.

Section 2.2: 12, 20, 26

Aircraft Defects. Hydraulic landing assemblies coming from an aircraft re-work facility are inspected for defects. Historical records indicate that 8% have defects in shafts only, 6% have defects in bushings only, and 2% have defects in both shafts and bushings. One of the assemblies is selected at random. What is the probability that it

1. Has at least one type of the two defects?
2. Has exactly one type of the defects?
3. Has neither type of defect?