

Homework 1

- ▶ Released on: May 12, 2020 (Tuesday)
- ▶ Due on: May 18, 2020 (Monday) at 12 noon
- ▶ Points: 70
- ▶ Late policy: late submissions by email allowed until 24 hours after deadline.
 - ▶ -2 points for each late hour

Homework 1

- Problems from end of chapter 1:

https://www.probabilitycourse.com/chapter1/1_5_0_chapter1_problems.php

Problem	Points	Topic	Remarks
3	4	Venn diagrams	
6	2	Set theory/partitions	
14	6	Set theory & probability axioms	
15	5	Events & probability axioms	1,2,2 points for the sub-questions
23	8	Conditional Probability	
25	5	Independence	
29	10	Independent events	

Homework 1 (Continued)

- ▶ Solved Problems:

- ▶ From Section 1.4.2 (Law of total probability):

- ▶ https://www.probabilitycourse.com/chapter1/1_4_2_total_probability.php

- ▶ Example 1.24 (2 points)

- ▶ From 1.4.3 (Bayes' rule):

- ▶ https://www.probabilitycourse.com/chapter1/1_4_3_bayes_rule.php

- ▶ Example 1.25, 1.26 (2 points each)

- ▶ From section 1.4.5 (Mix of topics)

- ▶ https://www.probabilitycourse.com/chapter1/1_4_5_solved3.php

- ▶ Problem nos. 2, 3, 5, 6: 3, 4, 3, 4 points respectively

Homework 1 (Continued)

- ▶ From the document at
https://templeu.instructure.com/courses/76914/files/8773797?module_item_id=1924519
- ▶ Chain rule: (2 points)
 - ▶ Exercise 13.2: Q. 3 (page 546)
- ▶ Independent events: (2 points each)
 - ▶ Exercise 13.2: 16 (b), 16 (c) (page 546-548)
- ▶ Law of total probability and Bayes theorem: (2 points each)
 - ▶ Exercise 13.3: Q. 4, 5, 8, 11 (page 556 - 557)