Answers to Midterm 1 Practice problems

Note: Below you can find answers (but not complete solutions) to the Midterm 1 practice problems. If you don't know how to start a problem or you get a different answer than the one listed below, come and ask questions during office hours or during the review sessions in class. There is no guarantee for the correctness of these answers. If you think you found a mistake, please let me know!

If you are looking for problems with complete solutions, check out the following:

- Examples from the lecture notes, solved in class

- Homework problems, solutions posted on Canvas

- Quiz problems, solutions posted on Canvas

- Groupwork problems, solutions posted on Canvas

- Problems with videos (Khan, actuarial exam) posted on the "extra help" pages on Canvas

1. $(A \cap B') \cup (B \cap A')$ $(A \cap B) \cup (B \cap C)$
   $B \cap A' \cap C'$ $(A \cap B) \cup (B \cap C)$

2. (a) 0.2
   (b) 0.5

3. 0.05

4. 0.6

5. (a) 0.217
   (b) 0.52
   (c) 0.627
   (d) 0.181

6. 5,523,300

7. (a) 0.0476
   (b) 0.333
   (c) 0.0278

8. (a) 0.753
   (b) $1.116 10^{-14}$

9. (a) 0.874
   (b) 0.454
   (c) 0.519

10. (a) 0.0667

(b) 0.333

11. (a) 0.324
    (b) 0.229

12. (a) 0.306
    (b) 0.333

13. (a) 0.5
    (b) 0.267
    (c) 0.4

14. (a) 0.278
    (b) 0.00463
    (c) 0.000772
    (d) 0.0154

15. 0.5 and 0.75

16. 0.545

17. (a) 0.0455
    (b) 0.0128

18. 9

19. (a) yes
    (b) no
    (c) no
    (d) no
    (e) no
    (f) yes