Solution 2

Section 1.2

- #9. (a). $(E \cup F)(F \cup G) = (F \cup E)(F \cup G) = F \cup EG$.

  (b). Using part (a), we have

$$\begin{aligned}(E \cup F)(E^c \cup F)(E \cup F^c) &= (F \cup EE^c)(E \cup F^c) \\ &= F(E \cup F^c) = FE \cup FF^c = FE.\end{aligned}$$

- #19. Let $B_1 = A_1$, $\mathrm{B}_2 = A_2 - A_1, B_3 = A_3 - (A_1 \cup A_2), \ldots, B_n = A_n - \cup_{i=1}^{n-1} A_i, \ldots$

• Section 1.4:

- #1. No; P(sum 11)=2/36 while P(sum 12)=1/36

- #2. 0.33+0.07=0.40.