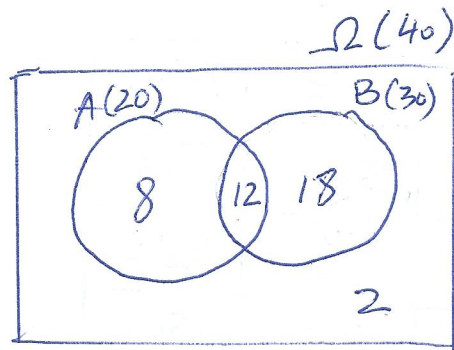


#Ω = 40 Canadian tourists
 A: visited Argentina
 B: Visited Brazil

p. 166 # 1



a) $P(A|B) = \frac{12}{30}$

b) $P(B|A) = \frac{12}{20}$

c) $P(A|B') = \frac{8}{10} \leftarrow \frac{8}{8+2}$

d) $P(B|A') = \frac{18}{18+2} = \frac{18}{20}$

p. 167, #2 #Ω = 1000 employees

AGE \ GENDER	Male (M)	Female (F)	Total
age < 30 (A)	100	150	250
30 ≤ age ≤ 40 (B)	240	210	450
age ≥ 40 (C)	180	120	300
Total	520	480	1000

a) 1. $P(M) = \frac{520}{1000}$

2. $P(A) = \frac{250}{1000}$

3. $P(M \cap A) = \frac{100}{1000}$

b) 1. $P(A|M) = \frac{100}{520}$

2. $P(M|A) = \frac{100}{250}$

c) 1. $P(F) = P(\text{Employee is a female}) = \frac{480}{1000}$

2. $P(F|A) = P(\text{Female Employee knowing she is under 30}) = \frac{150}{250}$

3. $P(A|F) = P(\text{age under 30 knowing the employee is female}) = \frac{150}{480}$

4. $P(M|C) = P(\text{Employee is male knowing he is over 40}) = \frac{180}{300}$

5. $P(F|A \cup B) = P(\text{Female Employee given that she is under 30 or between 30 and 40}) = \frac{360}{700}$

6. $P(M|B \cup C) = P(\text{Male Employee given that he is between 30 and 40 or over 40}) = \frac{420}{750}$