TQY 01

Question1: Probability Axioms

Assume that P(A) = 0.5, P (A ∩ C) = 0.18, P(C) = 0.4, P(B) = 0.4, P (A ∩ B ∩ C) = 0.06,

P (B ∩ C) = 0.18, and P (A ∩ B) = 0.15. Calculate the following probabilities:

a. P (A ∪ B ∪ C)

b. P (A' ∩ (B ∪ C))

c. P ((B ∩ C)' ∪ (A ∩ B)')

d. P (A/ (A ∩ C))

Question 2: Counting

A hand of five cards is chosen randomly and without replacement from a standard deck of 52 cards.

a. What is the probability that the hand contains exactly 2 aces and exactly 1 kings? Include at least 4 digits following the decimal point in your answer.