Assignment #1

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Course: *Introduction to Mathematical Logic* – Professor: *Prof. Tao*
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Question 1

Answer.

(*a*) From the Question 1(a), we have the $P(S_A) = 0.8$ and $P(S_B) = 0.6$, the S_A and S_B make decisions independently means that $P(S_A S_B) = P(S_A)P(S_B)$, So we have all the possible outcomes are

Question 2

Answer.

(*a*) From the question 2, we have the conditional mean

$$E(Y|X = i) = \sum_{j=0}^{i} j \cdot P(Y = j|X = i)$$

, and the

Question 3

Answer.

(*a*) From sub-question (a), we can get the triangle $S = \{(x,y) : -6 < y < x < 6\}$ showing in the fig 1.

Question 4

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Answer.

(a)

```java
public class demo {
    public static void main(String[] args) {
        System.out.println("This is an java program.");
    }
}
```