Problem 11.16.3.4

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.1 Consider the experiment of throwing a die, if a multiple of 3 comes up, throw the die again and if any other number comes, toss a coin. Find the conditional probability of the event 'the coin shows a tail',given that 'atlest one die shows a 3'.

.2 A die is thrown again and again until three sixes are obtained. Find the probability of obtaining the third six in the sixth throw of the die.

.3 Let X represent the difference between the number of heads and the number of tails obtained when a coin is tossed 6 times. What are possible values of X?

.4 A card is selected from a pack of 52 cards

   a) How many points are there in the sample space?

   b) Calculate the probability that the cards is an ace of spades.

   c) Calculate the probability that the card is

      i) an ace

      ii) black card.

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