

Unit 3 - Week 2

Course outline

How does an NPTEL online course work?

Week 1

Week 2

Advanced Probability Theory Lec04

Advanced Probability Theory Lec 05

Quiz : Assignment 2

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Week 4

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Assignment 2

The due date for submitting this assignment has passed.
As per our records you have not submitted this assignment.

Due on 2020-02-12, 23:59 IST.

1) $n(A \cup B) = 30$, $n(A) = 20$, $n(B) = 30$, find $P(A|B)$. (NOTE: n represents the set count and A & B are subsets of sample space)

1 point

- 1
 1/2
 2/3
 0

No, the answer is incorrect.
Score: 0

Accepted Answers:
2/3

2) Two standard dice are thrown simultaneously. Given that the sum of the two faces equals to 8, what is the probability that the first throw equals to 5?

1 point

- 1/36
 1/9
 1/5
 1/2

No, the answer is incorrect.
Score: 0

Accepted Answers:
1/5

3) A bag contains 10 balls numbered from 1 to 10 each. Two balls are chosen with replacement. What is the probability of getting at least one even numbered ball if the total sum of values is 12?

1 point

- 1/5
 9/100
 1/4
 5/9

No, the answer is incorrect.
Score: 0

Accepted Answers:
5/9

4) Choose all the correct statements:

1 point

- if A and B are independent events, $P(A \cap B) = P(A)P(B)$
 if A affects B positively, $P(A|B) < P(A)$
 if A and B are independent events, $P(A|B) = P(A)$
 if A affects B positively, $P(B|A) > P(B)$

No, the answer is incorrect.
Score: 0

Accepted Answers:
 if A and B are independent events, $P(A \cap B) = P(A)P(B)$
 if A and B are independent events, $P(A|B) = P(A)$
 if A affects B positively, $P(B|A) > P(B)$

5) A couple has two children, of which at least one is a girl. If the probabilities of having a boy or a girl are both equal, what is the probability that the couple has two girls?

1 point

- 2/3
 1/4
 1/3
 1/2

No, the answer is incorrect.
Score: 0

Accepted Answers:
1/3

6) Two people have to spend exactly 15 consecutive minutes in a bar on a given day, between 12:00 and 13:00. Assuming uniform arrival times, what is the probability they will meet?

1 point

- 4/9
 5/9
 1/8
 1/2

No, the answer is incorrect.
Score: 0

Accepted Answers:
5/9

7) A father claims about snowfall last night. First daughter tells that the probability of snowfall on a particular night is 1/8. Second daughter tells that 5 out of 6 times the father is lying! What is the probability that there actually was a snowfall?

1 point

- 1/36
 1/48
 1/8
 1/18

No, the answer is incorrect.
Score: 0

Accepted Answers:
1/36

8) A person has undertaken a construction job. The probabilities are 0.65 that there will be strike, 0.80 that the construction job will be completed on time if there is no strike, and 0.32 that the construction job will be completed on time if there is a strike. Determine the probability that the construction job will be completed on time.

1 point

- 0.44
 0.52
 0.48
 0.2

No, the answer is incorrect.
Score: 0

Accepted Answers:
0.48

9) In a factory which manufactures bolts, machines A, B and C manufacture respectively 25%, 35% and 40% of the bolts. Of their outputs, 5, 4 and 2 percent are respectively defective bolts. A bolt is drawn at random from the product and is found to be defective. What is the probability that it is manufactured by the machine B?

1 point

- 0.02
 0.40
 0.60
 0.55

No, the answer is incorrect.
Score: 0

Accepted Answers:
0.40

10) An equilateral triangle is inscribed in the unit circle. Now a point is selected randomly inside the circle and a chord is drawn taking this point as a mid point. What is the probability that this chord has length greater than the side of the triangle?

1 point

- 1/2
 1/4
 1/9
 1/3

No, the answer is incorrect.
Score: 0

Accepted Answers:
1/4