



Student Name in Arabic: د. خالد النجار

Section: 1 → 10

نموذج إجابة

1- Find the constants of curve  $y = a \cos(x) + bx$  that best fit the following data (31,17), (23,13), (12,15)

2- Choose the correct answer giving reason:

i- The student body of a large university consists of 60% female students. A random sample of 8 students is selected, what is the probability that among the students in the sample at least 6 are male?

- (a) 0.0413
- (b) 0.0079
- (c) 0.0007
- 0.0499
- (e) None of the above

ii- One coin is tossed 3 times, let A is the sequence of tosses in which tails came up on third one, B is the event in which heads came up on the second toss, then events A and B are

- (a) disjoint
- (b) dependent
- independent
- (d) None of the above

iii In New England, 84% of the houses have a garage and 65% of the houses have a garage and a backyard. What is the probability that a house has a backyard given that it has a garage?

- 77%
- (b) 109%
- (c) 19%
- (d) None of the above.

1- If we consider the function  $y = a \phi_0(x) + b \phi_1(x)$  such that

$$\sum_{i=1}^N y_i \phi_0(x_i) = a \sum_{i=1}^N \phi_0^2(x_i) + b \sum_{i=1}^N \phi_0(x_i) \phi_1(x_i)$$

$$\sum_{i=1}^N y_i \phi_1(x_i) = a \sum_{i=1}^N \phi_0(x_i) \phi_1(x_i) + b \sum_{i=1}^N \phi_1^2(x_i), \text{ where } \phi_0(x) = \cos(x)$$

$$\text{and } \phi_1(x) = x, \sum_{i=1}^3 \phi_0(x_i) \phi_1(x_i) = 26.234, \sum_{i=1}^3 \phi_0^2(x_i) = 1.834,$$

$$\sum_{i=1}^3 \phi_1^2(x_i) = 1634, \sum_{i=1}^3 \phi_0(x_i) y_i = 21.286, \sum_{i=1}^3 \phi_1(x_i) y_i = 1006,$$

therefore:


$$21.286 = 1.834a + 26.234b, 1006 = 26.234a + 1634b$$

[6 marks]

2-i)  $P(\text{male}) = 0.4, n = 8$ , therefore  $P(x \geq 6) = P(x=6) + P(x=7) + P(x=8) = 28(0.4)^6(0.6)^2 + 8(0.4)^7(0.6)^1 + (0.4)^8(0.6)^0 = 0.0498$  [3 marks]

2-ii) Since  $A = \{HTT, THT, TTT, HHT\}$  and  $B = \{HHH, HHT, THH, THT\}$ , therefore  $A \cap B = \{HHT, THT\}$ , therefore  $P(A)P(B) = (4/8)(4/8) = 1/4$   
 $P(A \cap B) = 2/8 = 1/4$ , thus  $P(A \cap B) = P(A)P(B)$  [3 marks]


2-iii)  $P(G) = 0.84, P(G \cap B) = 0.65$  and  $P(B/G) = \frac{P(G \cap B)}{P(G)} = 0.65/0.84 = 0.774$  [3 marks]

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| <p align="center"><b>Faculty of Engineering (Shoubra)</b><br/> <b>Engineering Mathematics and</b><br/> <b>Physics Department</b><br/> <b>Mid term exam</b></p>   | <br>#   | <p align="center"><b>Benha University</b><br/> <b>Mechanical Department</b><br/> <b>1<sup>st</sup> year Power</b><br/> <b>Time allowed: 30 minutes</b></p> |
| <p align="center"><b>Student Name in Arabic: د. خالد النجار</b>      <b>Section: 1 → 10</b>      <b>نموذج إجابة</b></p>  |  |  |
| <p>1-Find the constants of the exponential curve <math>y = ae^{bx}</math> that best fit the following data (11,7), (23,13), (32,25)</p> <p>2-Choose the correct answer giving reason:</p> <p>i- A particular county in Louisiana experienced incidents of West Niles virus at an average rate of 2.6 per month, what is the probability of at least three persons coming down with West Niles virus during a month?</p> <p>a. 12.26%<br/> b. 21.76%<br/> c. 26.40%<br/> • 48.16%<br/> e. None of the above</p> <p>ii- A standard deck of 52 cards mixed well, one card is drawn at random, if A is the event that an ace is taken out and B is the event that a red card at most a five is taken out, then events A and B are</p> <p>(a) independent<br/> • not independent<br/> (c) mutually exclusive<br/> (d) None of the above</p> <p>iii- In Europe, 88% of all households have a television. 51% of all households have a television and a VCR. What is the probability that a household has a VCR given that it has a television? (a) 173%<br/> • 58%</p> | <p>1- If we consider the function <math>\ln y = \ln a + bx</math> such that</p> $\sum_{i=1}^N \ln y_i = \ln a N + b \sum_{i=1}^N x_i, \quad \sum_{i=1}^N (\ln y_i) x_i = \ln a \sum_{i=1}^N x_i + b \sum_{i=1}^N x_i^2, \quad \text{where } N = 3,$ $\sum_{i=1}^3 \ln y_i = 7.73, \quad \sum_{i=1}^3 x_i = 66, \quad \sum_{i=1}^3 x_i^2 = 1674, \quad \sum_{i=1}^3 x_i \ln y_i = 183.403, \quad \text{therefore:}$ $7.73 = 3 \ln a + 66 b, \quad 183.403 = 66 \ln a + 1674 b$ <p align="right">[6 marks]</p> <hr/> <p>2-i) <math>P(X \geq 3) = 1 - P(X \leq 2) = 1 - [P(X=0) + P(X=1) + P(X=2)] = 1 - \frac{e^{-2.6} (2.6)^0}{0!} - \frac{e^{-2.6} (2.6)^1}{1!} - \frac{e^{-2.6} (2.6)^2}{2!} = 0.4816</math>, where <math>P(X=x) = \frac{e^{-\lambda} \lambda^x}{x!}</math></p> <p align="right">[3 marks]</p> <p>2-ii) Since <math>P(A) = 4/52</math>, <math>P(B) = 10/52</math> and <math>P(A \cap B) = 2/52</math><br/> Therefore <math>P(A \cap B) \neq P(A)P(B)</math></p> <p align="right">[3 marks]</p> <p>2-iii) <math>P(T) = 0.88</math>, <math>P(T \cap V) = 0.51</math> and <math>P(V/T) = \frac{P(T \cap V)}{P(T)} = 0.51/0.88 = 0.58</math></p> <p align="right">[3 marks]</p> |  |

Good luck

Dr. khaled Elnaggar


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| (c) 42%                |  |
| (d) None of the above. |  |

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| <p><b>Faculty of Engineering (Shoubra)</b><br/> <b>Engineering Mathematics and</b><br/> <b>Physics Department</b><br/> <b>Mid term exam</b></p>   | <br><p>\$</p>   | <p><b>Benha University</b><br/> <b>Mechanical Department</b><br/> <b>1<sup>st</sup> year Power</b><br/> <b>Time allowed: 30 minutes</b></p> |
| <p><b>Student Name in Arabic: د. خالد النجار</b>      <b>Section: 1 → 10</b>      <b>نموذج إجابة</b></p>  |  |   |
| <p>1-Find the constants of the curve <math>y = ax^2 + b \ln x</math> that best fit the following data (31,17), (23,13), (12,15)</p> <p>2-Choose the correct answer:</p> <p>i- A random sample of 15 people is taken from a population in which 40% favour a particular political stand. What is the probability that exactly 6 individuals in the sample favour this political stand?<br/> (a)0.4000<br/> (b)0.5000<br/> (c)0.04000<br/> • 0.2066<br/> (e) 0.0041</p> <p>ii- A standard deck of 52 cards mixed well, one card is drawn at random, if A is the event that an ace is taken out and B is the event that a black card is taken out, then events A and B are<br/> • independent<br/> (b) not independent<br/> (c) mutually exclusive<br/> (d) None of the above</p> <p>iii- A city survey found that 47% of teenagers have a part time job. The same survey found that 78% plan to attend college. If a teenager is chosen at random, what is the probability that the teenager has a part time job and plans to attend college?</p> | <p>1- If we consider the function <math>y = a \phi_0(x) + b \phi_1(x)</math> such that</p> $\sum_{i=1}^N y_i \phi_0(x_i) = a \sum_{i=1}^N \phi_0^2(x_i) + b \sum_{i=1}^N \phi_0(x_i) \phi_1(x_i)$ $\sum_{i=1}^N y_i \phi_1(x_i) = a \sum_{i=1}^N \phi_0(x_i) \phi_1(x_i) + b \sum_{i=1}^N \phi_1^2(x_i), \text{ where } \phi_0(x) = x^2 \text{ and}$ $\phi_1(x) = \ln x, \quad \sum_{i=1}^3 \phi_0(x_i) \phi_1(x_i) = 5316.329, \quad \sum_{i=1}^3 \phi_0^2(x_i) = 1224098,$ $\sum_{i=1}^3 \phi_1^2(x_i) = 27.796, \quad \sum_{i=1}^3 \phi_0(x_i) y_i = 25374, \quad \sum_{i=1}^3 \phi_1(x_i) y_i = 136.408,$ <p>therefore:<br/> <math>25374 = 1224098a + 5316.329b, \quad 136.408 = 5316.329a + 27.796b</math> [6 marks]</p> <p>2-i) <math>P(f) = 0.4, n = 15</math>, therefore <math>P(x=6) = 5005(0.4)^6(0.6)^9 = 0.2066</math>. [3 marks]</p> <p>2-ii) Since <math>P(A) = 4/52, P(B) = 26/52</math> and <math>P(A \cap B) = 2/52</math><br/> Therefore <math>P(A \cap B) = P(A)P(B)</math> [3 marks]</p> <p>2-iii) <math>P(T) = 0.47, P(C/T) = 0.78</math>, thus <math>P(C \cap T) = P(T) P(C/T) = 0.37</math> [3 marks]</p> |   |

Good luck

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| (a) 60%                |  |
| (b) 63%                |  |
| • 37%                  |  |
| (d) None of the above. |  |

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| <b>Student Name in Arabic: د. خالد النجار</b> <b>Section: 1 → 10</b> <b>نموذج إجابة</b>  |   |  |
| <p>1-Find the constants of the curve <math>y = \frac{1}{a + bx}</math> that best fit the following data (11,7), (23,13), (32,25)</p> <p>2-Choose the correct answer:</p> <p>i- The average number of children per Spanish couples was 1.34 in 2005. Suppose that one Spanish couple is randomly chosen. then the probability that they have at least one children is</p> <p>(a)0.3509<br/>(b)0.2618<br/>• 0.7382<br/>(d)Non of the above</p> <p>ii- One coin is tossed 3 times, let A is the sequence of tosses in which tails came up on third one , B is the event in which heads came up on the first toss, then events A and B are</p> <p>(a) mutually exclusive<br/>(b) dependent<br/>• independent<br/>(d) None of the above</p> <p>iii- In a school, 14% of students take drama</p> | <p>1- If we consider the function <math>1/y = a + bx</math> such that <math>\sum_{i=1}^N 1/y_i = aN + b \sum_{i=1}^N x_i</math>, <math>\sum_{i=1}^N x_i/y_i = a \sum_{i=1}^N x_i + b \sum_{i=1}^N x_i^2</math>, where <math>N = 3</math>,</p> <p><math>\sum_{i=1}^3 1/y_i = 0.26</math>, <math>\sum_{i=1}^3 x_i = 66</math>, <math>\sum_{i=1}^3 x_i^2 = 1674</math>, <math>\sum_{i=1}^3 x_i/y_i = 4.621</math>,</p> <p>therefore:<br/><math>0.26 = 3a + 66b</math>, <math>4.621 = 66a + 1674b</math> [6 marks]</p> <p>2-i) <math>P(X \geq 1) = 1 - P(X=0) = 1 - \frac{e^{-1.34} (1.34)^0}{0!} = 0.7382</math>, where</p> <p><math>P(X=x) = \frac{e^{-\lambda} \lambda^x}{x!}</math> [3 marks]</p> <p>2-ii) Since <math>A = \{HTT, THT, TTT, HHT\}</math> and <math>B = \{HHH, HHT, HTH, HTT\}</math>, therefore <math>A \cap B = \{HHT, HTT\}</math>, therefore <math>P(A)P(B) = (4/8)(4/8) = 1/4</math><br/><math>P(A \cap B) = 2/8 = 1/4</math>, thus <math>P(A \cap B) = P(A)P(B)</math> [3 marks]</p> <p>2-iii) <math>P(D) = 0.67</math>, <math>P(D \cap C) = 0.14</math> and <math>P(C/D) = \frac{P(C \cap D)}{P(D)} = 0.14/0.67 = 0.21</math> [3 marks]</p> |  |

Good luck

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| <p>and computer classes, and 67% take drama class. What is the probability that a student takes computer class given that the student takes drama class?</p> <p>(a) 81%</p> <ul style="list-style-type: none"> <li>• 21%</li> </ul> <p>(c) 53%</p> <p>(d) None of the above.</p> |  |
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| <p>1- Find the constants of curve <math>y = a \cos(x) + bx^2</math> that best fit the following data (31,17), (23,13), (12,15)</p> <p>2- Choose the correct answer giving reason:</p> <p>i- The student body of a large university consists of 60% female students. A random sample of 8 students is selected, what is the probability that among the students in the sample at least 6 are male?</p> <p>(a) 0.0079</p> <p>(b) 0.0413</p> <ul style="list-style-type: none"> <li>• 0.0499</li> </ul> <p>(d) 0.0007</p> <p>(e) None of the above</p> <p>ii- One coin is tossed 3 times, let A is the sequence of tosses in which tails came up on third one , B is the event in which heads came up on the second toss, then events A and B are</p> <ul style="list-style-type: none"> <li>• independent</li> </ul> <p>(b) dependent</p> <p>(c) disjoint</p> <p>(d) None of the above</p> | <p>1- If we consider the function <math>y = a \phi_0(x) + b \phi_1(x)</math> such that</p> $\sum_{i=1}^N y_i \phi_0(x_i) = a \sum_{i=1}^N \phi_0^2(x_i) + b \sum_{i=1}^N \phi_0(x_i) \phi_1(x_i)$ $\sum_{i=1}^N y_i \phi_1(x_i) = a \sum_{i=1}^N \phi_0(x_i) \phi_1(x_i) + b \sum_{i=1}^N \phi_1^2(x_i), \text{ where } \phi_0(x) = \cos(x)$ <p>and <math>\phi_1(x) = x^2</math>, <math>\sum_{i=1}^3 \phi_0(x_i) \phi_1(x_i) = 718.894</math>, <math>\sum_{i=1}^3 \phi_0^2(x_i) = 1.834</math>,</p> $\sum_{i=1}^3 \phi_1^2(x_i) = 1224098, \sum_{i=1}^3 \phi_0(x_i) y_i = 21.286, \sum_{i=1}^3 \phi_1(x_i) y_i = 25374,$ <p>therefore:</p> $21.286 = 1.834a + 718.894b, 25374 = 718.894a + 1224098b$ <p style="text-align: right;">[6 marks]</p> <p>2-i) <math>P(\text{male}) = 0.4</math>, <math>n = 8</math>, therefore <math>P(x \geq 6) = P(x=6) + P(x=7) + P(x=8) = 28(0.4)^6(0.6)^2 + 8(0.4)^7(0.6)^1 + (0.4)^8(0.6)^0 = 0.0498</math>.</p> <p style="text-align: right;">[3 marks]</p> <p>2-ii) Since <math>A = \{HTT, THT, TTT, HHT\}</math> and <math>B = \{HHH, HHT, THH, THT\}</math>, therefore <math>A \cap B = \{HHT, THT\}</math>, therefore <math>P(A)P(B) = (4/8)(4/8) = 1/4</math><br/> <math>P(A \cap B) = 2/8 = 1/4</math>, thus <math>P(A \cap B) = P(A)P(B)</math> [3 marks]</p> |
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| <p>iii In New England, 84% of the houses have a garage and 65% of the houses have a garage and a back yard. What is the probability that a house has a backyard given that it has a garage?</p> <p>(a) 19%</p> <p>• 77%</p> <p>(c) 109%</p> <p>(d)None of the above</p> | <p>2-iii)<math>P(G) = 0.84, P(G \cap B) = 0.65</math> and <math>P(B/G) = \frac{P(G \cap B)}{P(G)} = 0.65/0.84 = 0.774</math></p> <p>[3 marks]</p> |
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| <p>1-Find the constants of the exponential curve <math>y = be^{ax}</math> that best fit the following data (11,7), (23,13), (32,25)</p> <p>2-Choose the correct answer giving reason:</p> <p>i- A particular county in Louisiana experienced incidents of West Niles virus at an average rate of 2.6 per month, what is the probability of at least three persons coming down with West Niles virus during a month?</p> <p>a. 21.76%</p> <p>b. 26.40%</p> <p>c. 12.26%</p> <p>• 48.16%</p> <p>e. None of the above</p> <p>ii- A standard deck of 52 cards mixed well, one card is drawn at random, if A is the event that an ace is taken out and B is the event that a red card at most a five is taken out, then events A and B are</p> <p>(a) independent</p> | <p>1- If we consider the function <math>y = \ln b + ax</math> such that</p> $\sum_{i=1}^N \ln y_i = \ln b N + a \sum_{i=1}^N x_i, \quad \sum_{i=1}^N (\ln y_i) x_i = \ln b \sum_{i=1}^N x_i + a \sum_{i=1}^N x_i^2, \text{ where}$ $N = 3, \quad \sum_{i=1}^3 \ln y_i = 7.73, \quad \sum_{i=1}^3 x_i = 66, \quad \sum_{i=1}^3 x_i^2 = 1674, \quad \sum_{i=1}^3 x_i \ln y_i = 183.403,$ <p>therefore:</p> $7.73 = 3 \ln b + 66 a, \quad 183.403 = 66 \ln b + 1674 a$ <p>[6 marks]</p> <p>2-i) <math>P(X \geq 3) = 1 - P(X \leq 2) = 1 - [P(X=0) + P(X=1) + P(X=2)] = 1 - \frac{e^{-2.6} (2.6)^0}{0!} - \frac{e^{-2.6} (2.6)^1}{1!} - \frac{e^{-2.6} (2.6)^2}{2!} = 0.4816</math>, where <math>P(X=x) = \frac{e^{-\lambda} \lambda^x}{x!}</math></p> <p>[3 marks]</p> <p>2-ii) Since <math>P(A) = 4/52, P(B) = 10/52</math> and <math>P(A \cap B) = 2/52</math><br/>Therefore <math>P(A \cap B) \neq P(A)P(B)</math></p> <p>[3 marks]</p> <p>2-iii)<math>P(T) = 0.88, P(T \cap V) = 0.51</math> and <math>P(V/T) = \frac{P(T \cap V)}{P(T)} = 0.51/0.88 = 0.58</math></p> <p>[3 marks]</p> |                           |


Good luck

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- not independent
- (c) mutually exclusive
- (d) None of the above

iii- In Europe, 88% of all households have a television. 51% of all households have a television and a VCR. What is the probability that a household has a VCR given that it has a television?


- (a) 42%
- 58%
- (c) 173%
- (d) None of the above.

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| <p><b>Faculty of Engineering (Shoubra)</b><br/> <b>Engineering Mathematics and</b><br/> <b>Physics Department</b><br/> <b>Mid term exam</b></p>   |    | <p><b>Benha University</b><br/> <b>Mechanical Department</b><br/> <b>1<sup>st</sup> year Power</b><br/> <b>Time allowed: 30 minutes</b></p> |
| <p><b>Student Name in Arabic:</b> د. خالد النجار      <b>Section: 1 → 10</b>      <b>نموذج إجابة</b></p>  |   |   |
| <p>1-Find the constants of the curve <math>y = ax^2 + b \sin x</math> that best fit the following data (31,17), (23,13), (12,15)</p> <p>2-Choose the correct answer:</p> <p>i- A random sample of 15 people is taken from a population in which 40% favour a particular political stand. What is the probability that exactly 6 individuals in the sample favour this political stand?</p> <ul style="list-style-type: none"> <li>• 0.2066</li> <li>(b) 0.5000</li> <li>(c) 0.04000</li> <li>(d) 0.4000</li> <li>(e) 0.0041</li> </ul> <p>ii- A standard deck of 52 cards mixed</p> | <p>1- If we consider the function <math>y = a \phi_0(x) + b \phi_1(x)</math> such that</p> $\sum_{i=1}^N y_i \phi_0(x_i) = a \sum_{i=1}^N \phi_0^2(x_i) + b \sum_{i=1}^N \phi_0(x_i) \phi_1(x_i)$ $\sum_{i=1}^N y_i \phi_1(x_i) = a \sum_{i=1}^N \phi_0(x_i) \phi_1(x_i) + b \sum_{i=1}^N \phi_1^2(x_i), \text{ where } \phi_0(x) = x^2 \text{ and}$ $\phi_1(x) = \sin x, \quad \sum_{i=1}^3 \phi_0(x_i) \phi_1(x_i) = -913.106, \quad \sum_{i=1}^3 \phi_0^2(x_i) = 1224098,$ $\sum_{i=1}^3 \phi_1^2(x_i) = 1.167, \quad \sum_{i=1}^3 \phi_0(x_i) y_i = 25374, \quad \sum_{i=1}^3 \phi_1(x_i) y_i = -25.921,$ <p>therefore:</p> $25374 = 1224098 a - 913.106 b, \quad -25.921 = -913.106 a + 1.167 b$ <p style="text-align: right;">[6 marks]</p> <hr/> <p>2-i) <math>P(f) = 0.4, n = 15</math>, therefore <math>P(x=6) = 5005(0.4)^6(0.6)^9 = 0.2066</math>.</p> <p style="text-align: right;">[3 marks]</p> |   |

Good luck

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| <p>well, one card is drawn at random, if A is the event that an ace is taken out and B is the event that a black card is taken out, then events A and B are</p> <p>(a) mutually exclusive<br/> (b) not independent<br/> • independent<br/> (d) None of the above</p> <p>iii-A city survey found that 47% of teenagers have a part time job. The same survey found that 78% plan to attend college. If a teenager is chosen at random, what is the probability that the teenager has a part time job and plans to attend college?</p> <p>(a) 63%<br/> • 37%<br/> (c) 60%<br/> (d) None of the above.</p> | <p>2-ii) Since <math>P(A) = 4/52</math>, <math>P(B) = 26/52</math> and <math>P(A \cap B) = 2/52</math><br/> Therefore <math>P(A \cap B) = P(A)P(B)</math> [3 marks]</p> <p>2-iii) <math>P(T) = 0.47</math>, <math>P(C/T) = 0.78</math>, thus <math>P(C \cap T) = P(T) P(C/T) = 0.37</math> [3 marks]</p> |
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| <p><b>Faculty of Engineering (Shoubra)</b><br/> <b>Engineering Mathematics and</b><br/> <b>Physics Department</b><br/> <b>Mid term exam</b></p>   |   | <p><b>Benha University</b><br/> <b>Mechanical Department</b><br/> <b>1<sup>st</sup> year Power</b><br/> <b>Time allowed: 30 minutes</b></p> |
| <p><b>Student Name in Arabic: <i>د. خالد النجار</i></b>      <b>Section: 1 → 10</b>      <b>نموذج إجابة</b></p>   |  |   |
| <p>1-Find the constants of the curve <math>y = \frac{1}{b+ax}</math> that best fit the following data (11,7), (23,13), (32,25)</p> <p>2-Choose the correct answer:</p> <p>i- The average number of children per Spanish couples was 1.34 in 2005. Suppose that one Spanish couple is randomly chosen. then the probability that they have at least one children is</p> <p>(a)0.3509<br/> • 0.7382<br/> (c)0.2618<br/> (d)Non of the above</p> <p>ii- One coin is tossed 3 times, let A is</p> | <p>1- If we consider the function <math>1/y = b + ax</math> such that</p> $\sum_{i=1}^N 1/y_i = bN + a \sum_{i=1}^N x_i, \quad \sum_{i=1}^N x_i/y_i = a \sum_{i=1}^N x_i + b \sum_{i=1}^N x_i^2, \quad \text{where } N = 3,$ $\sum_{i=1}^3 1/y_i = 0.26, \quad \sum_{i=1}^3 x_i = 66, \quad \sum_{i=1}^3 x_i^2 = 1674, \quad \sum_{i=1}^3 x_i/y_i = 4.621, \quad \text{therefore:}$ $0.26 = 3b + 66a, \quad 4.621 = 66b + 1674a$ <p>[6 marks]</p> <p>2-i) <math>P(X \geq 1) = 1 - P(X=0) = 1 - \frac{e^{-1.34} (1.34)^0}{0!} = 0.7382</math>, where <math>P(X=x) = \frac{e^{-\lambda} \lambda^x}{x!}</math> [3 marks]</p> <p>2-ii) Since <math>A = \{HTT, THT, TTT, HHT\}</math> and <math>B = \{HHH, HHT, HTH, HTT\}</math>, therefore <math>A \cap B = \{HHT, HTT\}</math>, therefore <math>P(A)P(B) = (4/8)(4/8) = 1/4</math></p> |   |

Good luck

Dr. khaled Elnaggar



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| <p>the sequence of tosses in which tails came up on third one , B is the event in which heads came up on the first toss, then events A and B are</p> <p>(a) mutually exclusive<br/> (b) dependent<br/> • independent<br/> (d) None of the above</p> <p>iii- In a school, 14% of students take drama and computer classes, and 67% take drama class. What is the probability that a student takes computer class given that the student takes drama class?</p> <p>• 21%<br/> (b) 53%<br/> (c) 81%<br/> (d) None of the above.</p> | <p><math>P(A \cap B) = 2/8 = 1/4</math> , thus <math>P(A \cap B) = P(A)P(B)</math> [3 marks]</p> <p>2-iii) <math>P(D) = 0.67</math>, <math>P(D \cap C) = 0.14</math> and <math>P(C/D) = \frac{P(C \cap D)}{P(D)} = 0.14/0.67</math><br/> = 0.21 [3 marks]</p> |
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