Faculty of Engineering (Shoubra) Engineering Mathematics and Physics Department Mid term exam	Å	@	: נ	Benha University Mechanical Departmer 1 st year Power Fime allowed: 30 minut	nt Jes
د. خالد النجار :Student Name in Arabic	I	Section:	1→10	نموذج إجابة	20
 1- Find the constants of curve y = a cos(that best fit the following data (31,17), (2 (12,15) 2- Choose the correct answer giving reaso i- The student body of a large univ consists of 60% female students. A ra sample of 8 students is selected, what probability that among the students is sample at least 6 are male? (a)0.0413 (b)0.0079 (c)0.0007 0.0499 (e) None of the above 	x)+bx 23,13), n: versity andom is the in the	1- If we construct the end of th	$\begin{aligned} \sum_{i=1}^{N} \phi_0^2(x_i) + \\ \sum_{i=1}^{N} \phi_0^2(x_i) + \\ \sum_{i=1}^{N} \phi_0(x_i) \phi_i \\ = x_i, \sum_{i=1}^{3} \phi_0(x_i) \phi_i \\ = 1634, \sum_{i=1}^{3} \phi_0(x_i) \\ = 1.834a + 26.2 \end{aligned}$	ction $y = a \phi_{s}(x) + b \phi_{i}(x)$ + $b \sum_{i=1}^{N} \phi_{0}(x_{i}) \phi_{i}(x_{i})$ $(x_{i}) + b \sum_{i=1}^{N} \phi_{i}^{2}(x_{i})$, where $\phi_{i}(x_{i}) = 26.234$, $\sum_{i=1}^{3} \phi_{0}^{2}(x_{i})$ $x_{i})y_{i} = 21.286$, $\sum_{i=1}^{3} \phi_{i}(x_{i})$ 234b, $1006 = 26.234a + 1006$) such that $\phi_0(x) = \cos(x)$ $\phi_0(x) = 1.834$, $\phi_0(x) = 1.834$, $\phi_0(x) = 1.834$, $\phi_0(x) = 1.006$, $\phi_0(x) = 0.006$,
 ii- One coin is tossed 3 times, let A sequence of tosses in which tails came third one, B is the event in which heads up on the second toss, then events A and F (a) disjoint (b) dependent (c) independent (d) None of the above iii In New England, 84% of the houses have a gara and a back yard. What is the probability th house has a backyard given that it has a gate 77% (b) 109% 	is the up on came 3 are ve a ge nat a arage?	2-i) P(mal P(x=8) = 2 = 0.0498. 2-ii) Since $A \cap B = \{:$ P(A $\cap B\} =$ 2-iii)P(G) 0.65/0.84	e) = 0.4, n = 8, $28(0.4)^{6}(0.6)^{2} + 28$	therefore $P(x \ge 6) = P(x=8(0.4)^7(0.6)^1 + (0.4)^8(0.6)^4$ HT, TTT, HHT} and HT, THH, THT}, therefore $P(A)P(B) = (4/8)^6$ $P(A \cap B) = P(A)P(B)$ B) = 0.65 and $P(B/G) = -6^{-1}$	$=6) + P(x=7) +$ $[3 marks]$ Fore $(4/8) = \frac{1}{4}$ $[3 marks]$ $\frac{P(G \cap B)}{P(G)} =$ $[3 marks]$
(c)19% (d)None of the above.					

Faculty of Engineering (Shoubra)		Benha University
Engineering Mathematics and		Mechanical Department
Physics Department		1 st year Power
Mid term exam	AND AND ALL CALLER AND A	Time allowed: 30 minutes
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Student Name in Arabie Student	Soction: 1	نموذج احابة
1-Find the constants of the	1- If we consider the fu	$\frac{-710}{10} + \frac{1}{10} + \frac{1}{1$
exponential curve $y = 2e^{bx}$ that	N N N	$\sum_{N=1}^{N} \sum_{i=1}^{N} \sum_{j=1}^{N} \sum_{i=1}^{N} \sum_{i$
exponential curve $y = ac$ that hast fit the following data (11.7)	$\sum \ln y_i = \ln a N + b \sum x_i$	$\sum_{i=1}^{\infty} (\ln v_i) x_i = \ln a \sum_{i=1}^{\infty} x_i + b \sum_{i=1}^{\infty} x_i^2$, where N = 3,
(22, 12) (22, 25)	i = 1 $i = 1$	i=1 $i=1$ $i=1$
(23,13), (32,23)	3 3	$\frac{3}{2}$ 2 3 3
2 Change the correct encircle giving	$\sum \ln y_i = 7.73, \ \sum x_i =$	66, $\sum x_i^2 = 1674$, $\sum x_i \ln y_i = 183.403$, therefore:
2-Choose the correct answer giving	i=1 i=1	i=l i≥l
i A particular county in Louisiana	$7.73 = 3 \ln a + 66 b, 18$	$33.403 = 66 \ln a + 1674b$
I- A particular county in Louisiana		[6 marks]
experienced incidents of west innes		
virus at an average rate of 2.0 per	2-i) $P(X \ge 3) = 1 - P(X \le 3)$	$(X_2) = 1 - [P(X=0) + P(X=1) + P(X=2)] = 1 - 1$
hontin, what is the probability of at	$e^{-2.6}(2.6)^0 = e^{-2.6}(2.6)^1$	$e^{-2.6}(2.6)^2$ 0.1011 1 $e^{-\lambda}\lambda^x$
with West Niles views during a		$-\frac{1}{2!} = 0.4816$, where $P(X=x) = -\frac{1}{x!}$
with west Miles virus during a	0. 1.	
		[3 marks]
a. 12.20%	$2 \approx D(A) = 1/52$	$P(D) = 10/52 = 10(A \cap D) = 2/52$
0.21.70%	2-11) Since $P(A) = 4/52$,	P(B) = 10/52 and $P(A B) = 2/52$
c. 20.40%	Therefore $P(A B) \neq$	P(A)P(B) [3 marks]
• 40.10%		
e. None of the above	2-iii)P(T) = 0.88, P(T∫	$(V) = 0.51$ and $P(V/T) = \frac{P(T V)}{P(T)} = 0.51/0.88 =$
ii- A standard deck of 52 cards	0.70	$\mathbf{F}(\mathbf{I})$
mixed well, one card is drawn at	0.58	[3 marks]
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		
(a) independent		
 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) 173%		
• 58%		

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Faculty of Engineering (Shoubra)		Benha University	
Engineering Mathematics and		Mechanical Department	
Physics Department		1 st year Power	
Mid term exam	\$	Time allowed: 30 minutes	
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د. خالد النجار :Student Name in Arabic	Secti	on: $1 \rightarrow 10$ index is a set of the set of t	
1-Find the constants of the curve $y =$	1- If we con	sider the function $y = a \phi(x) + b \phi(x)$ such t	hat
$ax^{2}+b$ lnx that best fit the following data	N	$\frac{N}{N+2}$	
(31,17), (23,13), (12,15)	$\sum_{i=1}^{n} y_i \phi_0(\mathbf{X}_i) =$	$= a \sum_{i=1}^{\infty} \phi_0^2(x_i) + b \sum_{i=1}^{\infty} \phi_0(x_i) \phi_1(x_i)$	
2-Choose the correct answer:	$\sum_{i=1}^{N} y_i \phi_i(x_i) =$	$= a \sum_{i=1}^{N} \phi_0(x_i) \phi_i(x_i) + b \sum_{i=1}^{N} \phi_i^2(x_i), \text{ where } \phi_0(x) =$	x^2 and
i- A random sample of 15 people is taken	1-1	3	
from a population in which 40% favour a	$\phi(\mathbf{x}) = \ln \mathbf{x}$	$\sum \phi_0(\mathbf{x}_i)\phi_1(\mathbf{x}_i) = 5316.329, \ \sum \phi_0^2(\mathbf{x}_i) = 1224$.098,
particular political stand. What is the		i=1 $i=1$	
probability that exactly 6 individuals in	$\sum_{i=1}^{3} 1^{2} (\mathbf{a})$	$27.70(\frac{3}{5}+(.)) = 25274(\frac{3}{5}+(.)) = 12$	C 100
the sample favour this political stand?	$\sum_{i=1}^{n} \phi_{i}^{-}(\mathbf{x}_{i}) =$	27.796, $\sum_{i} \Phi_0(\mathbf{x}_i) \mathbf{y}_i = 25374$, $\sum_{i=1}^{i} \Phi_1(\mathbf{x}_i) \mathbf{y}_i = 13$	6.408,
(a)0.4000	thorefore:		
(b)0.5000	125274 - 122	$4008_{0} + 5216 220h + 126 408 - 5216 220_{0} + 27$	706h
(c)0.04000	23374-122	4096a +3510.3290, 130.408 – 3510.329a + 27	[6 morke]
• 0.2066			
(e) 0.0041	2-i) $P(f) = 0$.4, n = 15, therefore $P(x=6) = 5005(0.4)^6(0.6)^5$)
ii- A standard deck of 52 cards mixed	= 0.2066.		[A]
well, one card is drawn at random, if A is			[3 marks]
the event that an ace is taken out and B is	a a	$(A) A(5) D(D) Q(5) A D(A \cap D) Q(5)$	
the event that a black card is taken out,	2-11) Since F	P(A) = 4/52, P(B) = 26/52 and P(A B) = 2/52	
then events A and B are	Therefore	$P(A \mid B) = P(A)P(B)$	[3 marks]
• independent			
(b) not independent			
(c) mutually exclusive	2-111)P(T) =	0.47, $P(C/T) = 0.78$, thus $P(C T) = P(T) P(C/T)$	T) =0.37
(d) None of the above			[3 marks]
···· • • • • • • • • • • • • • • • • •			
III-A City survey found that 47% of			
teenagers nave a part time job. The same			
survey round that /8% plan to attend			
what is the probability that the tears			
has a part time job and plane to attend			
nas a part time job and plans to attend			
conege?			

(a) 60% (b) 63% • 37% (d) None of the above.		
Faculty of Engineering (Shoubra) Engineering Mathematics and Physics Department Mid term exam	(%	Benha University Mechanical Department 1 st year Power Time allowed: 30 minutes
Student Name in Arabic: 1 1-Find the constants of the curve y = 1/(a+bx) (11,7), (23,13), (32,25) 2-Choose the correct answer: 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 (a)0.3509 (b)0.2618 • 0.7382 (d)Non 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	Section Section: 1 - If we can $\sum_{i=1}^{N} 1/y_i = i$ $\sum_{i=1}^{3} 1/y_i = 0$ therefore: 0.26=3 2-i) P(X \ge P(X=x) = i 2-ii) Since A \cap B = { P(A \cap B) = 1	ion: 1→10 ionsider the function $1/y = a + bx$ such that $aN + b\sum_{i=1}^{N} x_i$, $\sum_{i=1}^{N} x_i/y_i = a\sum_{i=1}^{N} x_i + b\sum_{i=1}^{N} x_i^2$, where N = 3, 0.26, $\sum_{i=1}^{3} x_i = 66$, $\sum_{i=1}^{3} x_i^2 = 1674$, $\sum_{i=1}^{3} x_i/y_i = 4.621$, 3 $a + 66b$, $4.621 = 66$ $a + 1674b$ [6 marks $\ge 1) = 1 - P(X=0) = 1 - \frac{e^{-1.34}(1.34)^0}{0!} = 0.7382$, where $\frac{e^{-\lambda}\lambda^x}{x!}$ [3 marks $x = A = \{HTT, THT, TTT, HHT\}$ and $B = \{HHH, HHT, HTH, HTT\}$, therefore $\{HHT, HTT\}$, therefore P(A)P(B) = (4/8)(4/8) = \frac{1}{4} $= 2/8 = \frac{1}{4}$, thus P(A ∩ B) = P(A)P(B) [3 marks]
 came up on the first toss, then events A and B are (a) mutually exclusive (b) dependent independent (d) None of the above iii- In a school, 14% of students take drama 	2-iii)P(D) 0.14/0.67	$P(D) = 0.67, P(D \cap C) = 0.14 \text{ and } P(C/D) = \frac{P(C \cap D)}{P(D)} = 0.21$ [3 marks]

	 and computer classes, and 67% take drama class. What is the probability that a studen takes computer class given that the studen takes drama class? (a) 81% 21% (c) 53% (d) None of the above. 	a t t		00
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	Faculty of Engineering (Shoubra)		Benha Mechanic	/University al Department
	Physics Department		1 st ve	ear Power
	Mid term exam	*	Time allow	ved: 30 minutes
	Student Nome in Archier 12111112	Reations 1	10	ما حا حا ما
	Student Name in Arabic: 54, :-			
	1- Find the constants of curve $y = a \cos(x) + bx^2$ that best fit the following	1- If we consider t	the function $y = a \phi_0(x)$	\mathbf{x}) + b $\phi_{\mathbf{y}}(\mathbf{x})$ such that
	$y = a \cos(x) + 6x$ that best fit the following data (31,17), (23,13), (12,15)	$\sum_{i=1}^{N} y_i \phi_0(x_i) = a \sum_{i=1}^{N} \phi_0(x_i)$	$p_0^2(\mathbf{x}_i) + b \sum_{i=1}^{N} \phi_0(\mathbf{x}_i) \phi_i(\mathbf{x}_i)$	x,)
	2- Choose the correct answer giving	N N	() ()	· · · · · · · · · · · · · · · · · · ·
	reason:	$\sum_{i=1} y_i \phi_i(x_i) = a \sum_{i=1} \phi_i(x_i)$	$\Phi_0(\mathbf{x}_i)\Phi_1(\mathbf{x}_i) + b\sum_{i=1}^{2} \Phi_1^2(\mathbf{x}_i)$	x_i , where $\phi_0(x) = \cos(x)$
	i- The student body of a large university		-	3
	consists of 60% female students. A	and $\phi_1(x) = x^2$, $\sum_{i=1}^{n}$	$\oint \phi_0(\mathbf{x}_i) \phi_1(\mathbf{x}_i) = 718.89$	94, $\sum_{i=1}^{n} \phi_0^2(\mathbf{x}_i) = 1.834$,
	what is the probability that among the	i=]	3	i=1
	students in the sample at least 6 are male?	$\sum \phi_{1}^{2}(x_{i}) = 122409$	v_{i}^{0} , $\sum_{i=1}^{n} \phi_{i}(\mathbf{x}_{i}) \mathbf{y}_{i} = 21.$	286, $\sum \phi_i(x_i)y_i = 25374$,
	(a) 0.0079	i=1	i =1	i =1
	(b) 0.0413	therefore:	. 710 0041 05074	710.004 . 10040001
	• 0.0499	21.286 = 1.834a	+ /18.8940, 253/4 =	= /18.894a + 1224098b
	(d) 0.0007			
	(e) None of the above	2-i) $P(male) = 0.4$.	n = 8, therefore P(x)	$\geq 6) = P(x=6) + P(x=7) +$
	ii- One coin is tossed 3 times, let A is the	$P(x=8) = 28(0.4)^6$	$(0.6)^2 + 8(0.4)^7 (0.6)^1 +$	$(0.4)^8(0.6)^0$
	sequence of tosses in which tails came up	= 0.0498.		[3 marks]
	on third one, B is the event in which			
	heads came up on the second toss, then	2-ii) Since $A = \{H B \}$	TT, THT, TTT, HHT	} and UT) therefore
	events A and B are	$\mathbf{P} = \{\mathbf{P} \in \mathbf{P} : \mathbf{P} \in \mathbf{P} \}$	(HH, HHI, IHH, IF) T) therefore $P(\Lambda)P(\Lambda)$	(11), therefore (B) = $(4/8)(4/8) = 1/4$
	• independent	$P(\Delta \cap R) = 2/8 = 1/2$	$(A) P(A \cap R) = P(A \cap R)$	$(\Delta)P(R) = \frac{(4)0}{(4)0} - \frac{74}{(4)}$
	(c) dependent (c) disjoint	I(A D) - 2/0 - 7	$4, \operatorname{unus} I(A \mid D) - P$	
	(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 back yard. What is the probability that a house has a backyard given that it has a garage? (a) 19% 77% (c) 109% (d)None of the above 	ve $2-iii)P(G) = 0.84, P(G \cap B) = 0.4$ 0.65/0.84 = 0.774	65 and P(B/G) = $\frac{P(G \cap B)}{P(G)}$ = [3 marks]
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Engineering Mathematics and	Mech	anical Department
Physics Department	Time	1 st year Power
with term exam	!	anoweu. 50 minutes
د. خالد النجار :Student Name in Arabic	Section: $1 \rightarrow 10$	نموذج إجابة
 1-Find the constants of the exponential curve y = be^{ax} that best fit the following data (11,7), (23,13), (32,25) 2-Choose the correct answer giving reason: A particular county in Louisiana experienced incidents of West Niles virus at an avarage rate of 2.6 per month what 	1- If we consider the function $y = \ln x_{i-1}^{N} \ln y_{i} = \ln b N + a \sum_{i=1}^{N} x_{i}^{N}$, $\sum_{i=1}^{N} (\ln y_{i}) x_{i}^{N}$ $N = 3, \sum_{i=1}^{3} \ln y_{i} = 7.73, \sum_{i=1}^{3} x_{i}^{N} = 66, \sum_{i=1}^{3} \ln x_{i}^{N}$ therefore: $7.73 = 3 \ln b + 66 a, 183.403 = 66$	$a_{i} b + ax \text{such that}$ $x_{i} = Ln \ b \sum_{i=1}^{N} x_{i} + a \sum_{i=1}^{N} x_{i}^{2}, \text{ where}$ $\sum_{i=1}^{N} x_{i}^{2} = 1674, \ \sum_{i=1}^{3} x_{i} \ln y_{i} = 183.403,$ $\ln b + 1674 \ a$
is the probability of at least three persons		[6 morks]
coming down with West Niles virus during a month? a. 21.76% b. 26.40% c. 12.26% • 48.16% a. None of the above	$\frac{2 - i) P(X \ge 3) = 1 - P(X \le 2) = 1 - [P(X = \frac{e^{-2.6}(2.6)^0}{0!} - \frac{e^{-2.6}(2.6)^1}{1!} - \frac{e^{-2.6}(2.6)^2}{2!} =$	$=0) + P(X=1) + P(X=2)] = 1 - \frac{e^{-\lambda}\lambda^{x}}{x !}$ = 0.4816, where P(X=x) = $\frac{e^{-\lambda}\lambda^{x}}{x !}$ [3 marks]
ii- A standard deck of 52 cards mixed well, one card is drawn at random, if A is	2-ii) Since $P(A) = 4/52$, $P(B) = 10/52$ Therefore $P(A \cap B) \neq P(A)P(B)$	2 and $P(A \cap B) = 2/52$ [3 marks]
the event that an ace is taken out and B is the event that a red card at most a five is	2-iii) $P(T) = 0.88, P(T \cap V) = 0.51$ ar	and $P(V/T) = \frac{P(T \cap V)}{P(T)} = 0.51/0.88$
taken out, then events A and B are	0.50	P(T)
(a) independent	= 0.58	[3 marks]
Good luck Dr.	khaled Elnaggar	

 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) Nona of the above 		
(d) None of the above.		
Faculty of Engineering (Shoubra)		Benha University
Engineering Mathematics and		Mechanical Department
Physics Department		1 ^{er} year Power
Mid term exam		1 ime allowed: 30 minutes
د. خالد النجار: Student Name in Arabic:	Section: $1 \rightarrow 10$	نموذج إجابة
1-Find the constants of the curve	1- If we consider the functio	$\mathbf{n} \mathbf{v} = \mathbf{a} \phi(\mathbf{x}) + \mathbf{b} \phi(\mathbf{x})$ such that
$y = ax^2 + b$ sinx that best fit the following	N N	N
data (31,17), (23,13), (12,15)	$\sum_{i=1}^{n} y_i \phi_0(x_i) = a \sum_{i=1}^{n} \phi_0^2(x_i) + b \sum_{i=1}^{n} b_i^2(x_i) + b \sum_{i=1}^{n} b_i^2$	$\sum_{i=1}^{n} \phi_0(\mathbf{x}_i) \phi_i(\mathbf{x}_i)$
2-Choose the correct answer:	$\sum_{i=1}^{N} y_i \phi_i(x_i) = a \sum_{i=1}^{N} \phi_0(x_i) \phi_i(x_i)$	$(b) + b \sum_{i=1}^{N} \phi_{i}^{2}(x_{i}), \text{ where } \phi_{0}(x) = x^{2} \text{ and } b$
i- A random sample of 15 people is	i=l i=l	i=1
taken from a population in which 40%	$\oint (\mathbf{x}) = \sin \mathbf{x} - \sum_{i=1}^{3} \oint (\mathbf{x}) \oint (\mathbf{x})$	$=-913106\sum^{3}\phi^{2}(x)=1224098$
favour a particular political stand. What	$\psi_1(X) = \text{SIIIX}$, $\sum_{i=1}^{i} \psi_0(X_i) \psi_1(X_i)$	$= 515.100, \sum_{i=1}^{n} q_0 (X_i) = 1221050,$
is the probability that exactly 6	33	_3
individuals in the sample favour this	$\sum \phi_{l}^{2}(\mathbf{x}_{i}) = 1.167, \ \sum \phi_{0}(\mathbf{x}_{i})$	$y_i = 25374$, $\sum \phi_i(x_i)y_i = -25.921$,
political stand?	i =1 i =1	i =1
• 0.2066	therefore:	
(b)0.5000	25374= 1224098 a -913.106	b, -25.921= -913.106a + 1.167b
(c)0.04000		[6 marks]
(d)0.4000		
(e) 0.0041	2-i) $P(f) = 0.4$, n = 15, theref	Fore $P(x=6) = 5005(0.4)^{\circ}(0.6)^{\circ} = 0.2066.$ [3 marks]
ii- A standard deck of 52 cards mixed		[6

well, one card is drawn at random, if A is the event that an ace is taken out and	2-ii) Since $P(A) = 4/52$, $P(B) = 26/52$ and $P(A \cap B) = 2/52$ Therefore $P(A \cap B) = P(A)P(B)$ [3 t	markel		
B is the event that a black card is taken	$\begin{bmatrix} 1 & 1 \\ 1 & 1 \end{bmatrix} = I(A)I(B) $	marksj		
out, then events A and B are				
(a) mutually exclusive	2-iii) $P(T) = 0.47$, $P(C/T) = 0.78$, thus $P(C \cap T) = P(T) P(C/T) =$	0.37		
(b) not independent	[3 n	narks]		
• Independent (d) None of the above				
iii-A city survey found that 47% of				
teenagers have a part time job. The same				
survey found that 78% plan to attend				
random what is the probability that the				
teenager has a part time job and plans to				
attend college?				
(a) 63%				
• $3/\%$				
(d) None of the above.	A			
(0)				
Faculty of Engineering (Chaubro)				
Faculty of Engineering (Shoubra)	Benha University			
Faculty of Engineering (Shoubra) Engineering Mathematics and	Benha University Mechanical Department			
Faculty of Engineering (Shoubra) Engineering Mathematics and Physics Department	Benha University Mechanical Department 1 st year Power			
Faculty of Engineering (Shoubra) Engineering Mathematics and Physics Department Mid term exam	Benha University Mechanical Department 1 st year Power Time allowed: 30 minutes			
Faculty of Engineering (Shoubra) Engineering Mathematics and Physics Department Mid term exam	Benha University Mechanical Department 1 st year Power Time allowed: 30 minutes			
Faculty of Engineering (Shoubra) Engineering Mathematics and Physics Department Mid term exam Student Name in Arabic: المناف النجار L-Find the constants of the curve	Benha University Mechanical Department 1^{st} year Power Time allowed: 30 minutesSection: $1 \rightarrow 10$ Left we consider the function $1/y = b + ax$ such that			
Faculty of Engineering (Shoubra) Engineering Mathematics and Physics Department Mid term exam Student Name in Arabic: د. خالد النجار 1-Find the constants of the curve 1	Benha University Mechanical Department 1^{st} year Power Time allowed: 30 minutesSection: $1 \rightarrow 10$ List provide the function $1/y = b + ax$ such thatNNNNNNNNN			
Faculty of Engineering (Shoubra)Engineering Mathematics andPhysics DepartmentMid term examStudent Name in Arabic: د. خالد النجار1-Find the constants of the curvey = $\frac{1}{b+ax}$ that best fit the following	Benha University Mechanical Department 1^{st} year Power Time allowed: 30 minutesSection: $1 \rightarrow 10$ Line in the function $1/y = b + ax$ such that $\sum_{i=1}^{N} 1/y_i = bN + a \sum_{i=1}^{N} x_i$, $\sum_{i=1}^{N} x_i/y_i = a \sum_{i=1}^{N} x_i + b \sum_{i=1}^{N} x_i^2$, where N = 3,			
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the sequence of tosses in which tails	$P(A \cap B) = 2/8 = \frac{1}{4}$, thus $P(A \cap B) = P(A)P(B)$ [3 marks]
came up on third one, B is the event in	
which heads came up on the first toss,	$P(C \cap D) = 0.67 P(D \cap C) = 0.14 \text{ and } P(C/D) = P(C \cap D)$
then events A and B are	$2-11(P(D) = 0.07, P(D C) = 0.14 \text{ and } P(C/D) = \frac{1}{P(D)} = 0.14/0.07$
(a) mutually exclusive	$= 0.21 \qquad [2 morks]$
(b) dependent	
• independent	
(d) None of the above	
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?	
• 21%	
(h) 53%	
(c) 81%	
(d) None of the above	