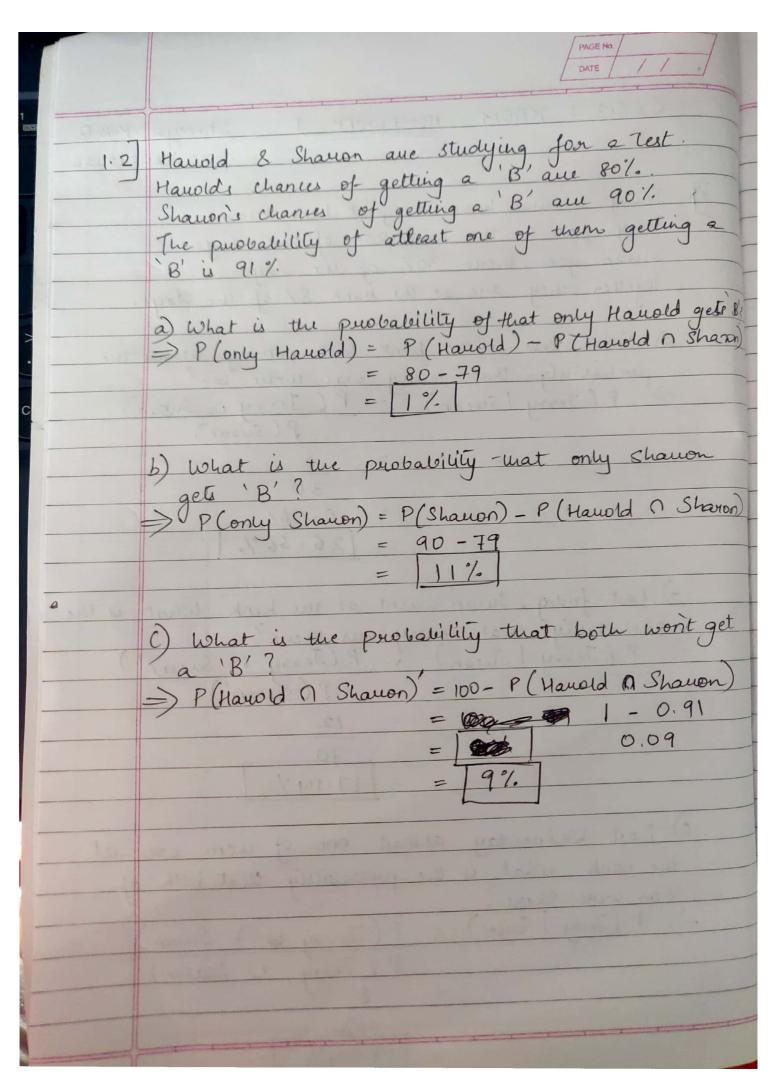
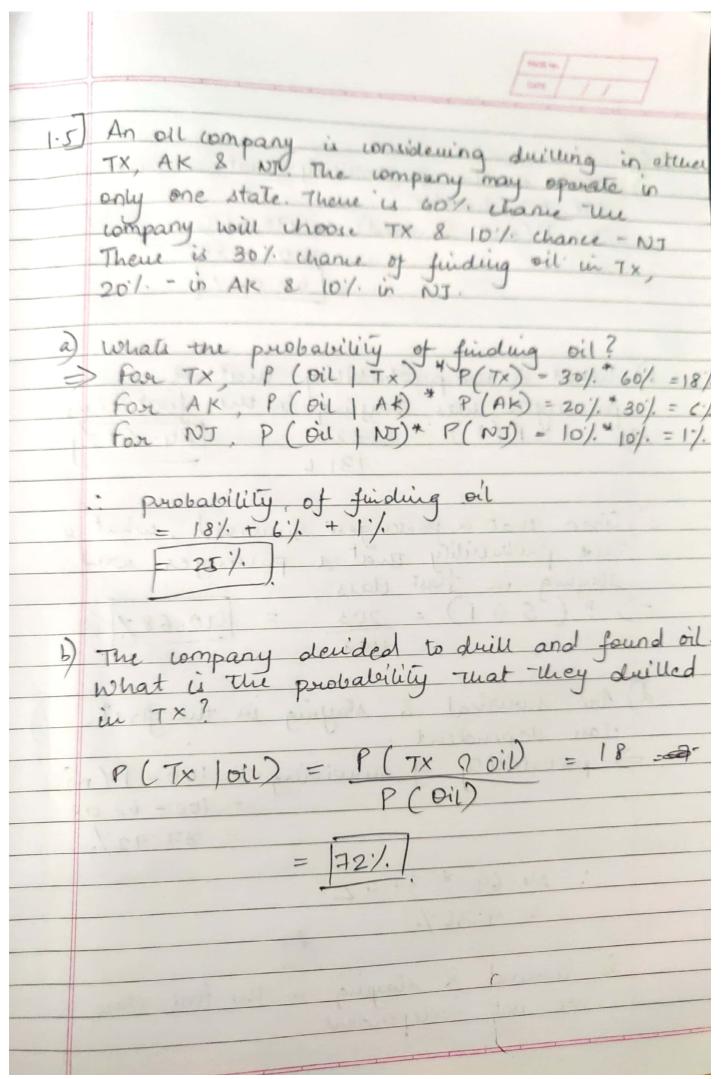
	PAGE No.
	CS 513: KDDM HOMEWORK 1 Shreeya Kokale CWID: 20005256
7	Toyyu & Suran have a laint 1
1	Jerry goes to the bank 20% of the days.
	Susan goes there 30% of the days.
	Together they are at the bank 8% of the days.
	a Course was at the bank last manday light to
111111111111111111111111111111111111111	a) Susan was at the bank last monday. What The
	probability that Jenny was them too?  P (Jerry   Susan) = P (Jerry n Sugan)
	P(Susan)
	A server in 8 or town in the server of
	30
17	0 Janett) 9 - Cameda) = 0.266
The season	= [26.66%.
	3111 -
	b) Last friday, Susan wasn't at the bank. What is the
	Duch ability that Jenny was there?
	> P (Jerry   Susan) = P (Jerry n Susan)
(	probability that Jenny was there?  P (Jerry   Susan') = P (Jerry n Susan')  P (Susan')
	0 - 1 700 - 12
	= 17.14%
	=   17.14 /
	at was and of
	c) Last Wednesday at least one of them was a
	c) Last Wednesday at least one of them was at the bank. What is the probability that both of them were there?  Them were there?  P (Jerry @ O Swan)
	them were there:
	D ( Jerry 1) Sausan)
	them were there:  P (Jerry   Swan)  P (Jerry U Sausan)  = 8
	42
	= [19.04.7.]



	THOSE NO.  DATE  / /
1.3	Jenny & Sugar han
	Jenny goes to the 20% of the day.  Susan goes there 30% of the day.  Together they are at the bank 8% of the days.  Are the events Jenny is at the bank and
	Are the events 'Jewy is at the bank' and 'Susan is at the bank' independent?
=	A MINE JA
	Both Jenny & Susan go time bank 8% of day If the events were independent the individual payameters of going together if callulated
. 1	product would be similar. But,
	20 × 30
	. The events are not independent.
	F = muz & Z = stil helf) 1
(12	= 1) b 12 of ) 9 0 (F = 100) 9
	28/5 4 78/5 6 78/.
	de beth event our equal exchis and

1.4	You voll 2 dice
à	Are the events ' The sum is 6' and
	The second die shows 5' independent?  If those events are independent -  P(second dice = 5 & sum = 6) =  P(sum = 6) + P(second dice = 5)
Tour	$\frac{5 \times 6}{36} = 1  \text{which is not}$ $36 \cdot 36  36  \text{equal}$
	Thus, both events au not independent.
<b>b</b> )	Are the events 'the sum is 7' and 'the first die shows 5' independent?  If these events are independent.
	$P \left( \text{first dice} = 5 & \text{Sum} = 7 \right) = P \left( \text{first dice} = 5 \right)$
	1/36 = 6/36 * 6/36
	As both events are equal, events are independent.



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what is the probability that a passenger did not survive?  P (not survived) = 1490 = 67.69%.
what is the puobability that a passenger was slaying in the first class?  P (First Class) = 325 = 14.76%
P (Survive) 1 Fixt (lass) = 203 711 = [28.5%]
Are survival & staying in first class independent P (survived) = 711 = 32.30%.  2201  P (first class) = 14.76  P (Survived of First class) = 203 = 28.55%.  711
As 28.55%. \( \delta \). \( \delta \). \( \delta \). \( \delta \). \( \delta \) \( \delta \) \( \delta \) \( \delta \) \( \delta \). \( \delta \) \(

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e)	Given that a passenger survived, what is the probability that the passenger was staying in the first class & the passenger was a child?  P ( Survived () First class () child)  = 6  711  = [0.847.)
$\Rightarrow$	Given that a passenger sunvived, what is the puopaloility that the passenger was an adult?  P (Sunvived of Adult) = 654  711  = 91.98 /.
5)	Given that a passenger sumived, am age & staying in the first class independent?  P(Sumvived () Adult) = 91.98'/.  P(Sumvived () First class) = 28.55'/.  P(Sumvived () Adult () First class)  = 199 = 27.70'/.
	27.70 \$ 7 P (Survived of Adult) x P (survived of First Class)  27.70 \$ 26.26.7.
	.". They are not independent.