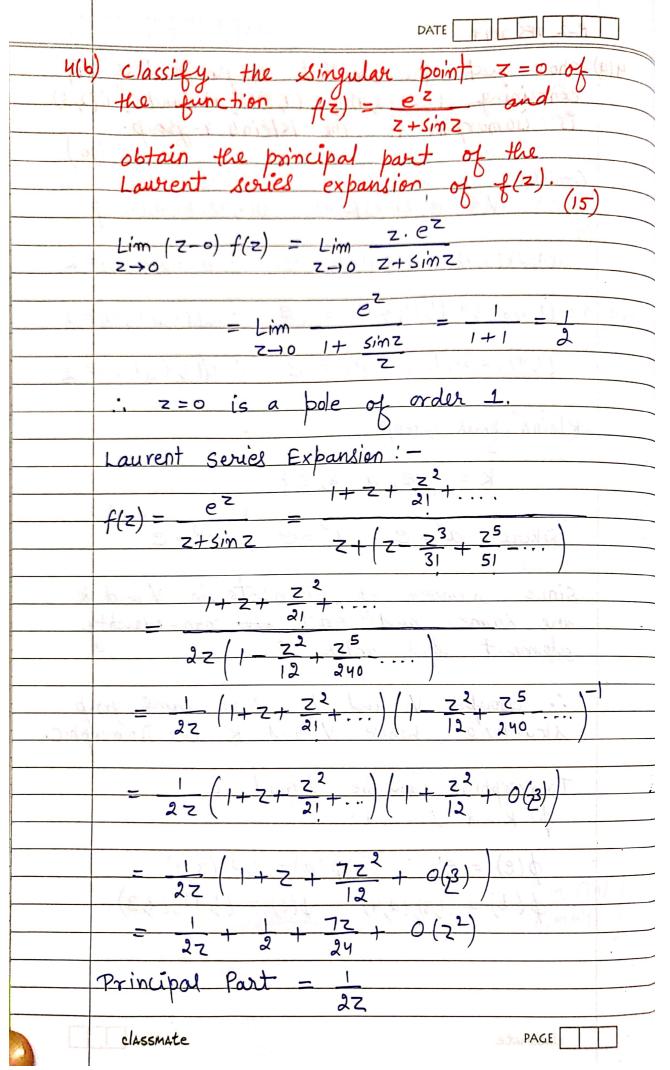
	F-2 1FS 2019 DATE	
419	show that the smallest subgroup V of A4	No. of the last of
A CONTRACTOR OF THE PARTY OF TH	is isomorphic to the Klein's 4- group.	paragina
	) show that the smallest subgroup $V$ of $A_{4}$ containing $(1,2)(3,4)$ , $(1,3)(2,4)$ and $(1,4)(2,3)$ is isomorphic to the Klein's 4-group.  Consider $V = \{e', (1,2)(3,4), (1,3)(2,4), (1,4)(2,3)\}$	
	(1,2)(3,4)(1,2)(3,4) = e : o((1,2)(3,4)) = 2	
	(1,3),(2,4)(1,3)(2,4) = e : o((1,3),(2,4)) = 2	
	(1,4)(2,3)(1,4),(2,3) = e : o((1,4),(2,3)) = 2	
	Klein's fout Group	
	$K = \{e, a, b, c\}$	£
	where $a^2 = e$ , $b^2 = e$ , $c^2 = e$	
	Since, number of elements in V and k are same and each de non-identity. element has order 2.	
	: Groups V and K have same group structure, hence V and K are isomorphic.	
	Tsomorphism can be defined as  p: K -> V s.t.	
	$\phi(e) = e'$ , $\phi(a) = (1,2)(3,4)$	\-{ \-{
	$\phi(b) = (1,3), (2,4), \phi(c) = (1,4), (2,3).$	\^ \_
	Show that do not the	
Province	classmate	



J. Saleman wants to visit cities C., Co, Col C. He does not want to visit any cities twice beforing completing the town of all the cities and wishes to return to his home city, the Starting station.  Cost of going from one city to another in rupess is given below in the table. Find the least cost routs.  To city  C1 C2 C3 C4  To 80 130 O  Mis sufficiently large to cost of going to city to restrict movement within the city we assign cost M (where Mis sufficiently large) to cost of going to city to red C1 C2 C3 C4  C1 M 30 80 50  C2 40 M 140 30  C3 40 S0 M 20  C4 70 80 130 M					
does not want to visit any cities twice beforing completing the town of all the cities and wishes to return to his home city, the Starting station.  Cost of going from one city to another insupers is given below in the table. Find the least cost route.  To City  C1 C2 C3  Tomaty  C4 O 0 140 30  C4 TO 80 130 O  C4 TO 80 130 O  C4 TO 80 130 O  C5 At the Starting city he C1. Also to restrict movement within the city we assign cost M (where Mix sufficiently large) to cost of going to city to city Now we have cost matrix as follows.  C1 C2 C3 C4  C1 M 30 80 50  C3 40 50 M 20  C3 40 50 M 20	1F05 2019				
completing the tour of all the cities and wishes to return to his home city, the Starting station.  Cost of gaing from one city to another in rupeas is given below in the table. Find the least cost route.  To City  C1 C2 C3 Y C4  From City C4 O 140 30  C3 40 50 O 20  C4 70 80 130 O  We C1 Also to restrict movement within the city we assign cost M (where M is sufficiently large) to cost of going to city to itself.  Now we have cost matrix as follows.  C1 C2 C3 C4  C1 M 30 80 50  C2 40 M 140 30  C3 40 50 M 20	a Salesman wants to visit cities C1, C2, C3 & C4. He				
return to his home city, the Starting station.  Cost of gaing from one city to another in rupers is given below in the table. Find the least cost route.  To City  C1 C2 C3 Y C4  Tom City C2 40 0 140 30  C3 40 50 0 20  C4 70 80 130 0  Sol 1st the Starting City he C1. Also to restrict movement righting the City we assign cost M (where Mis sufficiently large) to cost of going to city to How we have cost matrix as follows.  C1 C2 C3 C4  C1 M 30 80 50  C2 40 M 140 30  C3 40 50 M 20	does not want to visit any cities twice beforing				
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$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	Mis sufficiently large to cost of going to city to itself				
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	Now we have cost matrix as follows.				
C <sub>1</sub> M 30 80 50 C <sub>2</sub> 40 M 140 30 C <sub>3</sub> 40 50 M 20					
C <sub>2</sub> 40 M 140 30 C <sub>3</sub> 40 50 M 20	C1 C2 C3 C4				
C3 40 50 M 20	C1 M 30 80 50				
	C2 40 M 140 30				
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Subtract 30 (Minimum in row1) from Row1, 30 (m. in row2) from Row2, 20 (Minimum in Row3) Row3 2 70 (Minimum in Row4) from Row4	mimum
in muis from Rows, 20 (Minimum in Row 3)	7/10
Roy 3 & 70 (Minimum in Row 4) from Row 4	
we get cost Matrin as	
C1 C2 C3 C4	1700 A
C1 M-30 0 50 20	
C2 10 14-30 110 0	
C3 20 30 M-20 O	- X 1
C4 0, 10 60 M-70	TOTAL D
Charles Services	19.10
Subtract minimum of column from coursesponding	Olumns
aveget cost motria as	
C1 C2 C3 C4	
C1 M-30 0 0 20	
C2 10 M-30 60 0	
(3 20 30 M-70 0	
C4 6 10 10 M-70	
Page 7, 9-1	

,	P= 2 - 1
Cover all the Zeros of the	matria with minimum no of
horizontal or vertica	el lines
à1 C2 C3 C4	to the state of th
C1 M 30 0 0 20	Line of the second seco
C2 10 H-30 60 0	
(3 SD 30 H-70 D	
C4 0 10 10 M-70	
	4
20 11-1 110	
since minumal no of time	s is less offin 4, coptimal
assignment is not reacher	d.
Lines 1	· · · · · · · · · · · · · · · · · · ·
Now More that 10 is the o	smallest entry not covered by
our line Subtract 10 de	to elements at intersection of
10 - A: 1 add in	to elemente at interestinal
by any line a letter	and aniersection of
0	
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lines to a result cost Matria becomes
C1 C2 C3 C4
C1 M-20 0 0 30
C2 10 M-40 50 0
C3 20 20 M-80 0
C4 0 0 0 M-70
New Cover all yeros of matrix with minimum no. of horizontal
grential lines
C1 C2 C3 C4
-C+ H-20 0 0 30
C2 10 M-40 50 0
C3 20 20 M-80 0
-E4 0 0 0 M 70
Since minimum lines is less than 4, optimal assignment is not
reached.
Now rote, 10 is the simallest entry not covered by a line. Subtract 10 from all suncovered entries & add 10 to
Subtract 10 from all rencovered entries & add 10 to
entries at intersection of lines.
C1 C2 C3 C4
C1 M-20 0 0 40
C2 O M-50 40 O
C3 10 10 M-90 0
C4 D D D M-60
91000
Cover all term with minimum no of horizontall vertical lines
Cover all term with minimum no of horizontall vertical lines
C1 M-20 0 0 40 7
C2-0-M-50-A5
C3 10 10 H-40 0
4 0 0 M 60

Since the minimal no. of lines is 4, an optimal assignment
of zeros is possible.
C1 C2 C3 C4
C1 M-20 X 0 40
C2 0 M-50 40 Q
C3 10 10 M-40 0
C4 × O × M-60
Tighteen and the second of the
So assignment is given as $C_1 \rightarrow C_3 \rightarrow C_4 \rightarrow C_4 \rightarrow C_4$
Lie. Minimum cost voute is (1, → C3 → C4 → C2 → C, with  min cost = 80+20+80+40 = 6230
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