| MATH-245  NAME. SAREYAS SRINIVASA  PALOHAR ID: 012551187  The Order Answery neet in order.  Anwering what I know best  bout  1. Ami: Granch = F  Bushess = B  Music = M  Treated: 191 students  -710 are taking Treath, business  and music  -720 are taking French and business  -730 are taking French and business  -730 are taking French and music  -730 are taking French and music  -710 are taking French  -710 are taking treath  -710 are taking treath  -710 are taking treath   | 2/08/2021 QUIZ HY               |  |
|---|---------------------------------|--|
| PALOHIR ID: 012551187  There nete: Answery net in order.  Anwering what I know best  Liant  Businest = B  Music Search = B  Music Search = B  Music Search = B  Music Search = B  Music March promoto, Lucinoss  and music Search and busine  7 20 are taking French and busine  7 10 are taking French and music  7 10 are taking french and music  7 10 are taking french  10 are taking french  11 are taking french | MATH-245                        | arradia arrada a |
| There mate: Answery not in order.  Answering what I know best  bout.  2. Som: Grench = F  Business = B  Music = M  Trested: 191 students  -710 pare taking Trench, business  and music  -736 pare taking Trench and business  -736 pare taking Trench pand music  -710 pare taking Trench pand music  -710 pare taking Trench pand music  -710 pare taking Trench   |                                 |  |
| first bound = F  Law: Granch = F  Business = B  Music = M  Botal: 191 students  To are taking Tranch, business  and music  The are taking Tranch and business  The are taking French and business  The are taking french and music  The are taking french and music  The are taking french   |                                 | 1  |
| 2, Ami: Bound = F  Business = B  Music 2 M  Trotal: 191 students  = 7 10 are taking tranch, business  and music  = 7 36 are taking tranch and busine  = 7 20 are taking tranch and music  = 7 10 are taking business and music  = 7 65 are taking tranch  = 7 65 are taking tranch  = 7 65 are taking tranch  = 7 6 are taking trainess  4 are taking trainess  | I would trailed formerund       | lest   |
| Buyiness = B  Muria = M  Treated: 191 students  = 7 10 pare taking Granch, business  and music  = 7 3 c are taking French and busines  = 7 20 are taking French pand music  = 7 17 are taking business and music  = 7 65 are taking French  = 7 65 are taking Lusiness  4   | - first                         |  |
| Music 2 M  Trated: 191 students  7 10 pare taking Yearsh, brusiness  and music  7 3 c are taking French and busines  7 20 are taking French pund music  7 10 pare taking brusiness and music  7 6 are taking French  7 10 pare taking brusiness  7 6 are taking brusiness  4 are taking brusiness  4  |                                 |  |
| =710 pare taking tranch, business  and music  =736 pare taking tranch pand busines  =720 pare taking tranch pand music  =718 pare taking business and music  =769 pare taking tranch  =740 pare taking tranch  =740 pare taking tranch  |                                 |  |
| =710 are taking Franch, business  and music  =736 are taking Franch and busine  =720 are taking Franch pund music  =718 are taking business and music  =769 are taking Franch  =716 are taking Lusiness  =716 are taking Lusiness  415 are taking Lusiness  | dustrata 191 : partont          |  |
| =7 36 care taking French and busines =7 20 care taking French pend music =7 18 care taking brusinesh cand music =7 65 care taking French =7 46 care taking businesh   | =710 are taking Granch, busine  | N  |
| =7 20 are taking French pund music<br>=7 18 are taking brusiness and music<br>=7 69 are taking French<br>=7 16 are taking business &  | ` ^/                            | rijna.   |
| = 7 69 are taking French = 7 69 are taking Lusiness &   | = > 20 are taking French pend m | min  |
| = 76 are taking business &  | a defend a contract (w          | ush  |
| ( )   | = - 16 are taking business &    | <u> </u>   |
| - 16,2 core parind morning.   | = 7 63 are talking music.       | Personal   |

| we know the addition sule:                                       |
|--|
| N(FUBUM) = N(F) + N(B) +N(M)                                     |
| - M(EUB) -N(EUW)   |
| - M(BMM) + N(FMBMM   |
|  |
| =>N(FUBUM) = 65+76+63-36-20                                      |
| -18+10=146   |
|  |
| und pridat town shood to on.                                     |
| · No of people not taking any<br>classes = 191-14(FUBUM)=191-140 |
| = 51   |
|  |
| 3. Am Step 27 lyrien net byte and                                |
| 3. Am Step 27 lyvier net, byte and dog doesn't occur.            |
|  |
| 1(35) = novitation = (26)1                                       |
|  |
| enious son for nortationrey lator                                |
| (26-3+1)!  |
| 241  |
| =7 N(A)  |
|  |
|  |

| Trotal permutation of Duty Occurry<br>= 231 = W(R) |
|--|
| =231=N(R)  |
|  |
| Trotal premutation pol dog occioim                 |
| $= \mathbb{N}(\mathbb{C})$                         |
|  |
| M(AUR) = (26-3-4+1+1)=21!                          |
| N(BUC) = 211                                       |
| N(AUC) = (26-3-3+1+1)=221                          |
| N(KUBUC)= (26-3-3-4+3)=181                         |
|  |
| Step -3; Cohie required permutation                |
| = N-(N(H)+N(B)+N(C))+                              |
| (M (AUB) + M (AUC)) + N (BUC)                      |
| - N(BUBUC)   |
|  |
| = 261, - (241 + 231 + 241) +                       |
| (21! +21!, +22!)-181,                              |
|  |
| = 26! -2x(24)! - 29! +2x21!                        |
| + 121 191.   |
|  |
|  |

(3)

Step 4: Tinally, from the sets already the minder of ways: (26)! - 2×241. -231 +2(21)1 + (22)! - (15)! 1 Am 2 m EZ, m < 700 } are divi-- sible by 2,3 045. - tout many ship Z = 2 set of interper 3 which is countable and infinite = 30, +1, +2, +3, +4,-3 Numbers which son dinsible by 2,3 10, 5 = 2 ....., 700} stirifine gelestines =

Byw automobiles come in 7 models, so evalous, ranging sayer & 2 bransmission types. (a) Different types of BMW = 7x10x3x = 420. Here colony Is black Do different types of black color
BMW = 7×3×2 = 42 +5x+1x for insululous reported A. is X3+X4=35. n; >0 1=1,2,3,4. no of solution of x,+x, +.... K = N aringinen by (n+ k-1)

(6)

| Obsing the agreement of principles for $x = \frac{1-x}{x} = \frac{x}{x}$ (expressed dance) $= \frac{1-x}{x} = \frac{x}{x}$ $= \frac{1-x}{x} = \frac{x}{x}$ $= \frac{1-x}{x} = \frac{x}{x}$ $= \frac{1-x}{x}$ |
|--|
|  |
| M = 32 $M = 4$   |
| 32+4-1   |
| A man 1  |
| $=$ $\begin{pmatrix} 35 \\ 3 \end{pmatrix} = \frac{35!}{3!31!}$  |
|  |
| = 6545   |
| $(4)$ $44$ $x_{13}$ $x_{2} \ge 5$ $x_{3}$ $x_{4} > 7$  |
| =7 23,26478  |

 $\frac{\chi_{127} + 5}{4227} = \frac{\chi_{3} + 5}{2}$ 2 M, + M2 + M3 + M4+26=32 =7 we of solution to 4,+42+ 73+44=6 (6+4-1) = 9°C3 2 91 6. for (a) ALGORTTHM is a 9 chara-- poeter mord be the number of ways is 9! = 9 x 8 x 7 x 6 x 5 x 9 x 3 × 2 × 1 = 362 880 mays.

(8) (h) = 9x8x7x6x5x4x3x 60480 mays he first place can be filled with Letter A. And the remaining 5 places per filled with the remaining 8 letters of ALGORITHM (4) Eferra) = 8 x 7 x 6 x 5 x 4 k 3 + = 6720 Mays