Name . . . . . ,

row. .... col....

1. - 2.	3.	4.	Σ.

1a) 1b) 1c)

1d) 1e) 1f)

2a) 2b) 2c)

1. There are 21 tourists and 3 excursions to choose. In how many ways can they choose them, if every tourist can choose one and:

a) tourists are different, excursions are different
b) tourists are different, excursions are different, on every excursion there is the same number of tourists.
c) tourists are different, excursions are identical, every excursion chosen by at least one tourist
d) tourists are identical, excursions are different, every excursion chosen by at least one tourist
e) tourists are identical, excursions are different
f) tourists are identical, excursions are identical, every excursion chosen by at least one tourist
2. There are 7 tourists from every of 3 excursions.
a) in how many ways they can form a queue if tourist from one excursion are identical.
b) in how many ways they can form 3 ordered queues if tourists are all different
c) in how many ways can we choose 5 tourists such that from every excursion there is at least one chosen, (tourists are different)
3. What is the number of ways to choose a committee with 20 people out of 10 nations if there is at least one person in the committee from every nation and there is at most 3 people from first nation, at most 4 from the second, at most 5 from the third nation.
4. Prove by combinatorial argument: $3!S(n,3) + 3!S(n,2) + 3S(n,1) = 3^n$.