

1. 名詞解釋 (30points):
  - a. Hardy-Weinberg equilibrium
  - b. Genetic polymorphism
  - c. Inbreeding coefficient
2. In an Inuit population in East Greenland, it was found that among 200 people's blood type, 168 were MM, 30 were MN, and 2 were NN. Please use Chi-square goodness-of-fit test to verify whether this population exhibits Hardy-Weinberg equilibrium for this blood type gene. (50 points)

Critical values of the $\chi^2$ distribution				
<i>df</i>	1	2	3	4
$\alpha=0.05$	3.841	5.991	7.815	9.488

3. Please explain or illustrate what is difference between “alleles identical by descent” and “alleles identical by state”. (20 points)