Seatwork (Counting Principles)

Show your solutions

1. If a procedure can be broken down into n tasks, where each task i can be performed t_i ways. Prove via induction that the procedure P_n can be performed $t_1 t_2 \cdots t_n$ ways.

2. How many 4-element DNA sequences

   a) do not contain the base T?

   b) contain all four bases A, T, C, and G?

   c) contain exactly three of the four bases A, T, C, and G?