1. How many strings of four decimal digits
(a) do not contain the same digit twice?
(b) end with an even digit?
(c) have exactly three digits that are 9s?

2. How many license plates can be made using either three digits followed by three uppercase English letters or three uppercase English letters followed by three digits

3. A computer network consists of six computers. Each computer is directly connected to at least one of the other computers. Show that there are at least two computers in the network that are directly connected to the same number of other computers.

4. How many bit strings of length 12 contain
(a) exactly three 1s?
(b) at most three 1s?
(c) at least three 1s?
(d) an equal number of 0s and 1s?