- 6) A quad and a single:
  - (a)  $\binom{10}{1} \times \binom{9}{1}$  choices;
  - (b)  $\frac{5!}{4!1!}$  arrangements per choice;
  - (c)  $\binom{10}{1} \times \binom{9}{1} \times \frac{5!}{4!1!}$  total arrangements;
- 7) Five of a kind:
  - (a)  $\binom{10}{1}$  choices;
  - (b)  $\frac{5!}{5!}$  arrangements per choice;
  - (c)  $\binom{10}{1} \times \frac{5!}{5!}$  total arrangements.

Adding the total arrangements, we find that there are 100000 possible arrangements. Or, as before, the problem is simply the number of ways of arranging groups of five digits out of a total of ten with order important repetition permitted, which is  $10^5 = 100000$  possible arrangements.