Midterm of FCS

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(1)
If the first letter is 'a': The passwords can have 1 lowercase-letter or 2 lowercase-letters.
When exists 1 lowercase-letter,number of passwords= $10 * 9 * 8 * 7 * 6 = 30240$;
When exists 2 lowercase-letters,number of passwords= $26*10*9*8*7*C(5,1) = 655200$
So when the first letter is 'a',the number of passwords= 30240+655200 = 685440

If the first letter is '1': The passwords can have no/1/2 lowercase-letters.
When no lowercase-letter,number of passwords= $9 * 8 * 7 * 6 * 5 = 15120$
When exists 1 lowercase-letter,number of passwords= $26*10*9*8*7*C(5,1) = 655200$
When exists 2 lowercase-letters,number of passwords= $26^2*10*9*8*C(5,2) = 4867200$
So when the first letter is '1',the number of passwords= 15120 + 655200 + 4867200 = 5537520

Total number = 685440 + 5537520 = 6222960
Thus,there are **6222960** passwords.