Working of APRIORI:

If K is the number of items then $2^k - 1$ items sets are possible to put in desk.

Ex: k=3, $2^k - 1 = 7$ (6 + 1)

6 ---> 6 ways of combinations you can arrange in self.
1 ---> Null set

So, in real time we cannot put the total number of products in total combinations in a self in a market.

So, Apriori will go and search for the all possible combination and will suggests us.

- All subsets of frequent items set must be frequent.

.Ex: { I1 , I2 } ----------> Frequent ----------> Main set

- When we called as a frequent I1 and I2 individually should have in every transaction.

{ I1} { I2}----------> If the subset of Main set is frequent then Main set Is also frequent.

- If suppose I1 is not frequent and I2 is frequent
will { I1 , I2 } will be frequent, then answer is NO.

For ex: We have four different items {A}, {B}, {C}, {D} such that we will have 15 combinations we can see.

Here, Apriori will work as optimizing our calculations to minimum level.

Assume that we considered a number 10 % so, what ever the value less than 10% we see then we can assume that those items are not frequent.

Iteration 1: It will run for all possible combinations and find out that 'D' has less than 10%

Iteration 2: Since 'D' is less ---> it will exclude the D combination and will work on other remaining combinations ie. {AC} , {AB}, {BC} are only frequents.

Iteration 3: Let says {AC} is having less than 10% , so the possibility of AC with other alphabets will be ignored. Ex: {ABC}

Iteration 4: so, when all the alphabets are not having less than 10% then algorithm is going to stop running.