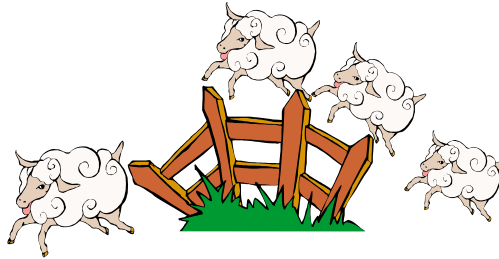


With and Without Ewe



The ten Sleepy Sheep are always available for counting should the need arise; one of them is black and nine are white. They are an unruly lot, however, and jump at random irregardless of how many there are or which one from the jumping pool jumped last.

If the person counting is very sleepy and only needs to count to ten the Sleepy Sheep do not bother going back for a second round of jumping. If the person will need to count higher, however, after each jump the sheep will return to take its' place in the jumping pool.

1. What is the probability of seeing the black sheep on any given jump if the sleeper only needs to count to ten?
2. What is the probability of seeing the black sheep on any given jump if the sleeper needs to count higher?