

AP Stats
Chap 14

Name _____ Pd _____



Amarillo Slim

Amarillo Slim, the card shark, is at it again. Suppose that Slim has been dealt the jack of spades from a standard deck of playing cards. Then he is dealt four more cards for a total of five cards. He wants to determine the probability that he will end up with exactly three jacks in his hand of five cards. Help him find this *theoretical probability*.

With your partner, use the standard deck of playing cards to perform this experiment. Take the jack of spades from the deck and put it in your “hand” laying it face-up on your desk in front of you. Have your partner shuffle the remaining cards and – without either of you looking at them – deal you four more cards, face-down. Turn the cards over and use the chart below to tally whether you have exactly three jacks in your hand or not. Each of you should perform the experiment five times, for a total of ten trials. Determine your *experimental probability* that you ended up with exactly three jacks in your hand. How close were you to the theoretical probability?

Trial	1	2	3	4	5	6	7	8	9	10	5 additional results	5 additional results	5 additional results
Exactly 3 Jacks													
Not Exactly 3 Jacks													

Take five results from a neighboring group. Factoring these results in with your own, what is your new probability? Is it closer to the theoretical, or farther from it?

Take five more results from a different group. How close is your probability now?

Take a final set of five results from a different group (you should now have a grand total of 25 trials.) What is your final probability?

Comment on what you’ve seen in this experiment.