|  |  |
| --- | --- |
| NAME: \_\_\_\_\_\_\_\_\_\_\_\_\_ | **Probability** |
| Stats | **DATE: Tuesday, December 15, 2015** |

Review:

|  |  |
| --- | --- |
| There are 16 people in this class, Im going to put 5 people in the front. How many different groups of 6 could I put in the front? | There are 16 people in this room. Three people will become teachers. How many different groups of 3 could it be? |

Chandler is going to go to Oxford Casino and try his luck at Blackjack. The way he plays, he has a 45% chance of winning. If he plays 5 hands, find

|  |  |
| --- | --- |
| P(all wins): | P(no wins): |
| P ( at least one win): | P(at least one loss): |

Find the probability that he wins only once?

What is the chance that he wins the first 3 hands, then loses the next two?

How many different ways could he win 3 hands and lose 2 (in any order)?

So what is the chance that he wins 3 out of 5 hands?

Fill in the table:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Wins | 0 | 1 | 2 | 3 | 4 | 5 |
| Probability |  |  |  |  |  |  |

What is probability that he wins more than he loses?

Example: The chance of a high school student in America going to college is 65%. If you randomly choose 10 kids, what is probability that 8 will go to college?

Example: The chance of a high school student in America going to college is 65%. If you randomly choose 10 kids, what is probability that at least 8 will go to college?

Using the online calculator:

1.  find P(2 successes)

2.  find P(10 successes)

3. In a history class, Ryan and Mary both take a multiple choice quiz.

 There are 10 questions. Each question has four possible answers. What is

 the probability that

1. Ryan will pass the test if he guesses an answer to each question.
2. Mary will pass the test if she studies so that she has a 75% chance of answering each question correctly.

4. Approximately 3% of the eggs in a store are cracked. If you buy two

 dozen eggs, what is the probability that

1. none of your eggs are cracked
2. at least one of your eggs is cracked
3. exactly two of your eggs are cracked

5. The probability the Jones will sink a foul shot is 70%. If he attempts 30

 foul shots, what is the probability that

1. he sinks exactly 21 shots
2. he sinks at least 21 shots
3. he sinks at most 21 shots
4. he sinks between 18 and 20 shots, inclusive.