

Name: _____

PanthID: _____

Quiz 5 - v.B

MAD 2104

Summer A 2015

Each of the following problems is worth 3 pts. It's OK if you just give the answers, but if the answer is wrong, I can give you some partial credit only if you provide some justification which gets close to the solution of the problem (justification can be short – e.g. complement rule, addition rule, etc.)

1. How many bit strings of length eight are there?
2. How many bit strings of length eight start with two 0s and end with a 1?
3. How many bit strings of length eight contain exactly six 0s?
4. How many bit strings of length eight contain at least six 0s?
5. How many bit strings of length eight either begin with three 1s or end with two 0s?
6. How many permutations of the letters $ABCDE$ are there?
7. How many permutations of the letters $ABCDE$ contain the string CA ?
8. A department contains 10 men and 8 women. How many ways are there to form a committee with three members if the committee should contain at least one woman and at least one men? (The positions in the committee are identical, so the order of the members does not matter.)
9. What is the coefficient of x^3y^7 in $(x + y)^{10}$?