

Name: _____

PanthID: _____

Quiz 5 - v.A

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 seven are there?

2. How many bit strings of length seven start with a 1 and end with a 0?

3. How many bit strings of length seven contain exactly five 1s?

4. How many bit strings of length seven contain at least five 1s?

5. How many bit strings of length seven either begin with two 0s or end with three 1s?

6. How many permutations of the letters $ABCDEF$ are there?

7. How many permutations of the letters $ABCDEF$ contain the string DAC ?

8. A department contains 8 men and 10 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^6y^4 in $(x + y)^{10}$?