

# Quiz 1

Name \_\_\_\_\_

Math 175, 12PM

Please justify all your answers

January 16, 2020

Please also write your full name on the back

1. True or false?

(a) The binomial coefficient  $\binom{n}{k}$  counts the number of ways to choose  $k$  ordered items from a set of  $n$  items.

(b) A set of size  $n$  has  $2^n$  subsets.

2. How many odd numbers from 1001 to 9999 have four distinct digits?

3. What is the coefficient of the term containing  $x^3y^6$  in the expansion of  $(2x - 3y)^9$ ?