

Math 234 Preview Exercises

Sections 9.5 and 9.6

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Read Sections 9.5 (from page 450) and 9.6 in the textbook and answer the following questions. *Hand in this worksheet at the next class.*

1. How does Example 9.5.5 count the number of possible teams when two members of a group insist on working as a pair?
2. How do you count the number of permutations of a set with repeated elements, such as the letters in the word *MISSISSIPPI*?
3. Why is $\binom{n}{r} = \binom{n}{n-r}$?
4. How do the binomial coefficients relate to Pascal's triangle?
5. What is the **Binomial Theorem**?