Math 234 Preview Exercises

Sections 9.4 and 9.5   NAME

Read Section 9.4 and Section 9.5 through page 450 in the textbook and answer the following questions.
Hand in this worksheet at the next class.

1. Suppose 5 items are to be placed in 4 boxes. What does the **Pigeonhole principle** say about this situation?

2. If five integers are selected from the set $A = \{1, 2, 3, 4, 5, 6, 7, 8\}$, why must at least two of the selected integers add up to 9?

3. In a group of 85 people, why must at least 4 of them have the same last initial?

4. What is an **r-combination**?

5. How are permutations related to combinations?