U8

Permutations and Combinations

QUIZ 2

NAME:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. A Math 30-1 class has 15 female students and 17 male students. How many committees of 5 people can the teacher choose if:

a) the committee contains 3 females and 2 males?

b) the committee contains **at most** two males?

c) the committee contains **at least one** female?

2. A group of 12 students finish a performance and begin to shake hands. How many handshakes happen if everyone must shake hands once?

3. In a package of 52 cards, how many **4 card hands** can be made that have:

a) no restrictions?

b) 2 hearts and one club?

c) at least one king?