Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period \_\_\_\_\_\_\_\_\_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_\_\_\_

**AFM Unit 5: Probability Homework Day 2**

**Evaluate each expression.**

1. $C(20,15)$ 2. $C(8,5)∙C(7,3)$

3. $C(8,2)∙C(5,1)∙C(4,2)$ 4. $C(4,2)∙C(13,3)∙C(13,2)$

5. Form a list of 10 books, how many groups of 4 books can be selected?

6. There are 85 telephones in the editorial department of Glencoe Publishing Company. How many 2-way connections can be made among the office phones?

7. How many baseball teams of 9 members can be formed from 14 players?

8. The cast of a school play requires 4 girls and 3 boys. They will be selected from 7 eligible girls and 9 eligible boys. How many ways can the cast be selected?

9. Suppose there are 8 points in a plane, no 3 of which are collinear. How many distinct triangles could be formed with these points as vertices?

10. Consider a deck of 52 cards.

 a. How many different 5-card hands can have 5 cards of the same suit?

 b. How many different 4-card hands can have each card from a different suit?

11. Write and solve your own combinations problem.