Tutor-USA.com Worksheet **Name:** _____
Combinations **Date:** _____ **Period:** _____ **Score:** _____

Find the value:

1) $C(7, 4)$

2) $C(10, 2)$

3) $C(21, 19)$

4) In how many ways may a committee of 4 be chosen from a group of 25?

5) From a group of 25 Democrats and 18 Republicans, how many committees consisting of 3 Democrats and 2 Republicans are possible if one of two specific Democrats is to be chairman?

6) On a baseball squad, there are 3 catchers, 5 pitchers, seven infielders and 7 outfielders. How many baseball mines can be formed?

7) In how many ways can a person get a bridge hand consisting of only aces or face cards?

8) In how many ways can a person get a bridge hand consisting of 2 aces, 1 king, 1 queen, 3 jacks, and the six other cards 10 or less?

9) Without considering special cases, how many straight lines are determined by 9 points?

10) Without considering special cases, how many circles are determined by 9 points?

11) How many tetrahedrons are determined by 9 points no four of which lie on the same plane?

12) In how many ways may a College president's wife invite
   a) Two

   b) Three

   c) Two or more

   of 8 faculty wives to a tea party?

13) Solve for n in the equation $C(n+2,4) = 6C(n,2)$

Answer Key

1) 35
2) 45
3) 210
4) $12\,650$
5) $84\,456$
6) $18\,375$
7) 560
8) 384 $C(36, 6)$
9) 36
10) 84
11) 126
12) a) 28
    b) 56
    c) 247
13) $n = 7$

