Algebra 2CP Chapter 11 PRACTICE Test ~ Sections 11.1-11.5, 11.7 Name _____ Period _____

Number and show all work on a separate sheet of paper. NO WORK, NO CREDIT!!!
Write your answers in the column to the right.

EQUATION BANK

$$\sum_{k=0}^{n} \frac{n!}{(n-k)!k!} a^{n-k}b^k \qquad a_n = a_1 + (n-1)d \qquad S_n = \frac{n}{2}(a_1 + a_n)$$

$$S = \frac{a_1}{1-r} \qquad S_n = \frac{n}{2}[2a_1 + (n-1)d] \qquad S_n = \frac{a_1 - a_n r}{1-r}$$

$$a_n = a_1 r^{n-1} \qquad S_n = \frac{a_1(1-r^n)}{1-r}$$

1. Find the 22nd term of the arithmetic sequence in which a_1 = -5 and d = 7. 1. _____
2. Write an equation for the nth term of the arithmetic sequence 18, 11, 4, -3, ... 2. _____
3. Find the three arithmetic means between 56 and 28. 3. _____
4. Find S_n for the arithmetic series in which a_1 = 10, d = -6, and a_n = -50 4. _____
5. Evaluate $\sum_{n=2}^{13}(3n+1)$. 5. _____
6. Find the fifth term of the geometric sequence for which a_1 = 243 and r = -1/3. 6. _____
7. Find the equation for the nth term of the geometric sequence 36, 12, 4, ... 7. _____
8. Find four geometric means between 3 and 96. 8. _____
9. Find the sum of the first 6 terms of the geometric series 4 - 2 + 1 - ... 9. _____
10. Find a_1 in a geometric series for which S_n = -364, r = -3, and n = 6. 10. _____
11. Evaluate $\sum_{n=1}^{5}\left(-\frac{1}{2}\right)^{n-1}$. 11. _____
12. Find the sum of the infinite series 1/8 - 3/16 + 9/32 - 27/64 + ..., if it exists. 12. _____
13. Evaluate $\sum_{n=1}^{\infty} -2\left(-\frac{5}{8}\right)^{n-1}$. 13. _____
14. Write $0.\overline{36}$ as a fraction. 14. _____
15. Expand $(3r+s)^5$. 15. _____
16. Find the fourth term in the expansion of $(x+2y)^6$. 16. _____