Ch. 11 Review

Arithmetic Sequence
$a_n = a_1 + d(n-1)$

1. Find the nth term if, $a_1 = -20$, $d = 7$, and $n = 21$ _____

2. Find a_{25} for -9, -6, -3,... _____

3. Find the missing terms in the arithmetic sequence

    $40,$_____,_____,_____,_____$,100$.

Arithmetic Series
$\int_n = \frac{n}{2}(a_1 + a_n)$

4. Find S_{11} for: $a_1 = 21$, and $a_{11} = 2$ _____

5. Find the first three terms of: $a_{15} = 243$ and

    $S_{15} = 1860$. _____,_____,_____

6. A Pile of fireplace logs at the Garden Shop has 15 logs

    on the top layer, 16 logs in the next layer, and so on.

    The pile contains 15 layers.

    How many logs are in the pile? _____

Geometric Sequence
$a_n = a_1 r^{n-1}$

7. Find the next two terms of: $\{54, 36, 24,...\}$ _____,_____

8. Find the nth term for: $a_1 = 3$, $n = 7$ and $r = 5$ _____

9. Find the missing geometric means in:

    _____$, -14,$_____,_____$,4802$.

10. Find the sum of the geometric series with:

   a_1 = 9, a_6 = 9216 and r = 4.   _____

11. Find the sum of the geometric series with:

   a_1 = 150, r = 2 and n = 7.   _____

12. Find a_1 for: S_9 = 513, r = -2.   _____

13. Find the sum of: 16 + 8 + 4 + ...   _____

14. Find the sum of: 16 + 24 + 36 + ...   _____

15. Find the sum of: 25 – 15 + 9 - ...   _____

16. Evaluate: $\displaystyle\sum_{x=1}^{8} 3x^2 + 5$.   _____.

17. Evaluate: $\displaystyle\sum_{n=1}^{5} 3(2^{n-1})$.   _____.

18. Find the 8th term in the series of: $\displaystyle\sum_{m=1}^{20} -x + 21$.

   _____.

19. If $(x+y)^{12}$ is expanded, what is the exponent on 'x' in the term that contains y^7?_____.

20. Expand $(4s - 2t)^5$.

   _____.

21. Expand $(3+w)^7$

   _____.