Arithmetic Series Review (Assignment 57)

Calculate.

1. $\sum_{k=1}^{8} 1$

2. $\sum_{k=1}^{10} k^2$

3. $\sum_{k=1}^{8} k$

4. $\sum_{k=1}^{10} k$

5. $\sum_{k=1}^{10} 1$

6. $\sum_{k=1}^{8} k^2$

Use your answers above to help you calculate each of the following.

7. $\sum_{k=1}^{8} (k^2 - 6k + 1)$

8. $\sum_{k=1}^{10} (-6 + 2k^2)$

9. $\sum_{k=1}^{10} (k^2 - k - 4)$

10. $\sum_{k=1}^{8} (2k + 3k^3 - 200)$

11. $\sum_{k=1}^{8} k(k - 5)$

12. $\sum_{k=1}^{10} (k - 3)(k - 4)$

"What is the sun's other job?"

Solve the following arithmetic sequences and series. The answer to each problem will match a letter that will allow you to figure out the joke.

1. Find a_{11} in the arithmetic sequence: $-7, -3, 1, 5, \ldots$

2. Find a_{26} for $1, \frac{7}{3}, \frac{11}{3}, \ldots$

3. If $a_n = -84$ in the arithmetic sequence $6, 1, -4, \ldots$, find n.

#4-5, find the missing terms for the following arithmetic sequence.

4. $5, \_\_\_\_, \_\_\_\_, \_\_\_\_, -7$

5 $\_\_\_\_, 8, \_\_\_\_, \_\_\_\_, 44$

#6-10, find S_n for each arithmetic series described.

6. $a_1 = 12, a_n = 100, n = 12$

7. $a_1 = 42, n = 8, d = 6$

8. $8 + 6 + 4 + \ldots + -10$

9. $\sum_{n=1}^{20}(2n + 1)$

10. $\sum_{p=4}^{16}(2p - 3)$

#11-12, find the first terms of each arithmetic series.

11. $a_1 = 7, a_n = 83, S_n = 900$

12. $n = 16, a_n = 15, S_n = -120$

A: $^{107}/_3$

I: $-4, 20, 32$

G: 440

U: 320

R: $-4, 24, 36$

N: $^{103}/_3$

O: -10

M: $7, 11, 15$

N: 504

G: 672

H: 33

I: 19

T: $-30, -27, -24$

L: 77

O: $2, -1, -4$

K: $-2, -6, -10$

P: $7, 14, 21$

11	8	4	2	10	5	6	1	12	3	7	9