# Handout: Arithmetic Shmarithmetic- Answers

1. List the first 4 terms of the sequence given by $\{a_n\} = 3(a_{n-1}) - 1$ whose first term is 5.

    $5, 14, 41, 122$

2. List the first 5 terms of the arithmetic sequence given by $\{a_n\} = 5n - 4$.

    $1, 6, 11, 16, 21$

3. Find the explicit rule for the sequence $5, 7, 9, 11, ....$

    $\{a_n\} = 2n + 3$

4. Find the explicit rule for the sequence $6, 13, 20, 27...$

    $\{a_n\} = 7n - 1$

5. Find the recursive rule for the sequence $4, 11, 32, 95....$

    $\{a_n\} = 3(a_{n-1}) - 1$

6. Given the arithmetic sequence $\{a_n\} = (a_{n-1}) + \frac{1}{2}$ with $a_1 = 10$, find the 99th term.

    $59$

7. Determine how many terms exist in the sequence $1, 3, 5, ..., 75, 77$.

    $39$

8. Find the 7th partial sum of the sequence $\{a_n\} = 6 - 2n$.

    $-14$

9. Find the sum of $-30, -26, -22, ..., 2, 6$.

    $-120$

10. Find the third partial sum of the geometric series given by: $\sum\limits_{n=1}^{\infty} 6\,(3)^{n-1}$.

    $78$