Name: _____ Date: _____

Write the explicit rule AND the recursive rule for each arithmetic sequence. Show your checked work for both:

1. 10, 15, 20, 25, …

2. -9, -2, 5, 12, 19, …

3. 23, 20, 17, 14, …

4. 8, 6.5, 5, 3.5, 2, …

Find the nth term for each arithmetic sequence:

5. $a_1 = -5$, $d = 4$, $n = 9$

6. $a_1 = 13$, $d = -5/2$, $n = 29$

Convert between explicit and recursive:

7. $a_n = -2n + 11$

8. $a_n = a_{n-1} + 7;\ a_1 = -3$

9. $a_n = a_{n-1} - 5;\ a_1 = 0$

10. $a_n = n - 16$

Complete each statement:

11. 97 is the _____th term of: -3, 1, 5, 9

12. -10 is the _____th term of: 14, 12.5, 11, 9.5

Write the formula for the sequence that represents the following scenarios:

13. After making his first deposit, Paul has $758 in his checking account. The next month, the balance is $836. The balance after the third month is $914.

d = _____

a_1 = _____

Formula: _____

14. The table shows the number of people at a school who caught the flu each month after the flu shot was given:

Month	1	2	3	4	5
# of People	30	25	20	15	10

d = _____

a_1 = _____

Formula: _____

Find the indicated term(s) in each arithmetic sequence:

15. a_{15} for -3, 3, 9, …

16. Find the 38th term of 103, 99, 95, …

17. Find the 43rd term of -124, -122, -120, …

18. The first term is 6 and the common difference is -4. Find the next 3 terms.