

Name: \_\_\_\_\_

Date: \_\_\_\_\_

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**Write the explicit rule for each arithmetic sequence. Show your checked work:**

1. 10, 15, 20, 25, ...

2. -9, -2, 5, 12, 19, ...

3. 23, 20, 17, 14, ...

4. 8, 6.5, 5, 3.5, 2, ...

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**Find the  $n$ th term for each arithmetic sequence:**

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

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

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**Complete each statement:**

7. 97 is the \_\_\_\_\_th term of: -3, 1, 5, 9

8. -10 is the \_\_\_\_\_th term of: 14, 12.5, 11, 9.5

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

9. 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.

$d = \underline{\hspace{2cm}}$

$a_1 = \underline{\hspace{2cm}}$

Formula: \_\_\_\_\_

10. 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

$$d = \underline{\hspace{2cm}}$$

$$a_1 = \underline{\hspace{2cm}}$$

Formula:  $\underline{\hspace{4cm}}$

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

11.  $a_{15}$  for  $-3, 3, 9, \dots$

12. Find the 38<sup>th</sup> term of  $103, 99, 95, \dots$

13. Find the 43<sup>rd</sup> term of  $-124, -122, -120, \dots$

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

15. Graph:  $a_n = 3n + 4$

16. Graph:  $6, 2, -2, \dots$

