

Name: _____

Date: _____

Write the explicit rule for each sequence:

1. 5, 7, 9, 11, 13, ...

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

3. 10, 50, 250, 1,250, ...

4. -9, -2, 5, 12, 19, ...

5. 1,080, 360, 120, 40, ...

6. 6, 12, 24, 48, ...

Find the n th term for each sequence:

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

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

9. $a_1 = 3$, $r = -4$, $n = 6$

10. $a_1 = 800$, $r = 1/2$, $n = 10$

Complete each statement:

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

12. .0078125 is the _____th term of:
128, 64, 32, 16,

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.

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	5	15	45	135	405

Formula: _____

15. The first term in an arithmetic sequence is 5. The fourth term in the sequence is -4. The tenth term is -22. Which function can be used to find the n th term of the arithmetic sequence?

- a. $F(n) = -n$
- b. $F(n) = n + 4$
- c. $F(n) = -3n + 8$
- d. $F(n) = \frac{1}{2}(n + 5) + 2$

16. Which formula represents the sequence in the table?

- a. $a_n = 2n + 1$
- b. $a_n = n/2 - 1$
- c. $a_n = 2n - 1$
- d. $a_n = n/2 + 1$

n	3	6	10	15
a_n	2.5	4	6	8.5

17. If the first picture has 4 dots, the second picture has 9 dots and the third picture has 16 dots, how many dots would be in the 6th picture?

- a. 25
- b. 36
- c. 49
- d. 64

18. Find the 38th term of 103, 99, 95, ...

- a. -45
 - b. -152
 - c. -49
 - d. 45
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