Arithmetic Sequences Practice Questions

1. Given the sequence $5, 8, 11, \ldots$ What is the next term?
   14

2. If an arithmetic sequence starts with 2 and has a common difference of 3, what is the 3rd term?
   8

3. The sequence $-1, 2, 5, \ldots$ is defined by which recursive formula?
   $a_n = a_{n-1} + 3$

4. An arithmetic sequence is defined by $a_n = a_{n-1} + 4$. If $a_5 = 33$, what is a_1?
   $a_1 = 17$

5. The sequence starts with -4 and the 5th term is 16. What is the recursive formula for the sequence?
   $a_n = a_{n-1} + 5$

6. If the third term of an arithmetic sequence is 14 and the fifth term is 22, determine the recursive formula.
   $a_n = a_{n-1} + 4$

7. An arithmetic sequence is defined by $a_n = a_{n-1} - 6$. If $a_7 = -35$, determine a_2.
   $a_2 = -5$

8. The 8th term of an arithmetic sequence is 50, and the 10th term is 70. Define the recursive formula for the sequence.

$a_n = a_{n-1} + 10$

9. If $a_3 = 6$ and $a_5 = 18$ in an arithmetic sequence, what is the value of a_1?
   $a_1 = -6$

10. Given the sequence $3, 5, 7, \ldots$ What is the explicit formula?
    $a_n = 2n + 1$

11. What is the 7th term of the sequence defined by $a_n = 2n + 1$?
    15

12. For the sequence $a_n = 3n - 2$, determine a_5.
    13

13. A sequence starts with 5 and has a common difference of -3. What is the explicit formula?
    $a_n = -3n + 8$

14. The 4th term of an arithmetic sequence is 16 and the 7th term is 28. Find the explicit formula.
    $a_n = 4n + 4$

15. If the explicit formula of a sequence is $a_n = -4n+10$, what is the common difference?
    -4

16. Given $a_5 = 23$ and $a_8 = 41$, determine the explicit formula of the sequence.
    $a_n = 6n + 5$

17. If $a_1 = 3$ and $a_10 = -57$, what is the explicit formula for the arithmetic sequence?
    $a_n = -6n + 9$

18. An arithmetic sequence has its 6th term as 45 and 11th term as 80. Find

the explicit formula.
$a_n = 7n + 3$