

Arithmetic Sequences

Name: _____

$$a_n = a_1 + (n - 1)d$$

Hour: _____

Is the sequence arithmetic? (Circle yes or no.) If yes, find the common difference (d). If no, leave d = _____ blank. On # 8 – 18, find the given term by continuing the pattern.

- | | | | |
|---------------------------------------|-----------|-----------|-----------------------------|
| 1. 6, 12, 18, 24, ... | yes or no | d = _____ | |
| 2. 1, 2, 4, 7, 11, ... | yes or no | d = _____ | |
| 3. 1, -1, -3, -5, -7, ... | yes or no | d = _____ | |
| 4. -9.7, -9.5, -9.3, -9.1, -8.9, ... | yes or no | d = _____ | |
| 5. 10, 20, 30, 40, 50, ... | yes or no | d = _____ | |
| 6. 7.5, 7.2, 6.9, 6.6, 6.3, ... | yes or no | d = _____ | |
| 7. 0, 3, 6, 9, 12, 15, ... | yes or no | d = _____ | |
| 8. 100, 110, 120, 130, 140, ... | yes or no | d = _____ | 22 nd term _____ |
| 9. 4, 7, 12, 13, 16, ... | yes or no | d = _____ | 13 th term _____ |
| 10. 1, 1, 2, 3, 5, 7, 12, 19, 31, ... | yes or no | d = _____ | 10 th term _____ |
| 11. 5, 10, 15, 20, 25, 30, ... | yes or no | d = _____ | 9 th term _____ |
| 12. 8, 7, 6, 5, 4, 3, 2, 1, ... | yes or no | d = _____ | 11 th term _____ |
| 13. 5, -5, 5, -5, 5, -5, ... | yes or no | d = _____ | 9 th term _____ |
| 14. 25, 27, 29, 31, 33, 35, ... | yes or no | d = _____ | 10 th term _____ |
| 15. -50, -45, -40, -35, -30, -25, ... | yes or no | d = _____ | 8 th term _____ |
| 16. 21, 13, 5, -3, -11, -19, -27, ... | yes or no | d = _____ | 14 th term _____ |
| 17. 1, 1, 2, 3, 5, 8, 13, 21, ... | yes or no | d = _____ | 12 th term _____ |
| 18. 0, -1, 1, 0, 2, 1, 3, ... | yes or no | d = _____ | 10 th term _____ |

19. In an arithmetic sequence beginning with 12 and ending with 144, how many integers are divisible by 3?

Find the inverse of the following functions.

20. $f(x) = -3x + 21$

21. $f(x) = (x - 4)^2$