

# FINDING THE NEXT TERM

Answer all of these questions. Remember to show your working out in all questions.

## MAIN QUESTIONS

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|-----|------------------------------|-----|----------------------------|
| 1.  | 2, 5, 8, 11, 14              | 2.  | 7, 11, 15, 19, 23          |
| 3.  | -3, 1, 5, 9, 13              | 4.  | 12, 9, 6, 3, 0             |
| 5.  | 0.5, 1.5, 2.5, 3.5, 4.5      | 6.  | 100, 95, 90, 85, 80        |
| 7.  | -10, -6, -2, 2, 6            | 8.  | 1.2, 2.4, 3.6, 4.8, 6.0    |
| 9.  | 17, 14, 11, 8, 5             | 10. | -15, -12, -9, -6, -3       |
| 11. | 3.25, 4.75, 6.25, 7.75, 9.25 | 12. | 42, 39, 36, 33, 30         |
| 13. | -8.5, -6.0, -3.5, -1.0, 1.5  | 14. | 1000, 998, 996, 994, 992   |
| 15. | 0, -2.5, -5, -7.5, -10       | 16. | 7, 10, 13, 16, 19          |
| 17. | -20, -16, -12, -8, -4        | 18. | 2.1, 3.4, 4.7, 6.0, 7.3    |
| 19. | 50, 47, 44, 41, 38           | 20. | -1, 0.5, 2, 3.5, 5         |
| 21. | 18, 15.5, 13, 10.5, 8        | 22. | -100, -95, -90, -85, -80   |
| 23. | 0.8, 1.6, 2.4, 3.2, 4.0      | 24. | 75, 70, 65, 60, 55         |
| 25. | -2.2, -1.1, 0, 1.1, 2.2      | 26. | 33, 30, 27, 24, 21         |
| 27. | -50, -45, -40, -35, -30      | 28. | 1.75, 2.5, 3.25, 4.0, 4.75 |
| 29. | 90, 87, 84, 81, 78           | 30. | -0.5, 0, 0.5, 1.0, 1.5     |

# MASTER QUESTIONS



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- M1.** A staircase has steps increasing by 3cm in height. If the first five steps are 15cm, 18cm, 21cm, 24cm, and 27cm tall, how tall is the sixth step?
- M2.** A train departs stations at intervals following a pattern: 09:15, 09:27, 09:39, 09:51, 10:03. When is the next departure?
- M3.** A plant grows 2.5cm each week. After five weeks it measures 8cm, 10.5cm, 13cm, 15.5cm, and 18cm. What will its height be next week?
- M4.** A savings account gains £12.50 interest monthly. The balances for five months are £250, £262.50, £275, £287.50, and £300. What will the balance be next month?
- M5.** A temperature drops by  $1.8^{\circ}\text{C}$  each hour. Readings at five hours are  $12^{\circ}\text{C}$ ,  $10.2^{\circ}\text{C}$ ,  $8.4^{\circ}\text{C}$ ,  $6.6^{\circ}\text{C}$ , and  $4.8^{\circ}\text{C}$ . What will it read next hour?
- M6.** A car's fuel consumption decreases by 0.3 litres per 100km each service. After five services it uses 9.5, 9.2, 8.9, 8.6, and 8.3 litres. What will it use after the next service?
- M7.** A runner improves her time by 4 seconds each race. Her times for five races are 65s, 61s, 57s, 53s, and 49s. What will her time be in the next race?
- M8.** A company's profits increase by £850 quarterly. For five quarters they are £5000, £5850, £6700, £7550, and £8400. What are the expected profits next quarter?
- M9.** A water tank loses 12.5 litres per hour. Levels at five hours are 200L, 187.5L, 175L, 162.5L, and 150L. What will the level be next hour?
- M10.** A book club reads 15 more pages each meeting. They read 40, 55, 70, 85, and 100 pages over five meetings. How many will they read next meeting?