

# 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              |  | 17    | 2.  | 7, 11, 15, 19, 23          |  | 27  |
| 3.  | -3, 1, 5, 9, 13              |  | 17    | 4.  | 12, 9, 6, 3, 0             |  | -3  |
| 5.  | 0.5, 1.5, 2.5, 3.5, 4.5      |  | 5.5   | 6.  | 100, 95, 90, 85, 80        |  | 75  |
| 7.  | -10, -6, -2, 2, 6            |  | 10    | 8.  | 1.2, 2.4, 3.6, 4.8, 6.0    |  | 7.2 |
| 9.  | 17, 14, 11, 8, 5             |  | 2     | 10. | -15, -12, -9, -6, -3       |  | 0   |
| 11. | 3.25, 4.75, 6.25, 7.75, 9.25 |  | 10.75 | 12. | 42, 39, 36, 33, 30         |  | 27  |
| 13. | -8.5, -6.0, -3.5, -1.0, 1.5  |  | 4.0   | 14. | 1000, 998, 996, 994, 992   |  | 990 |
| 15. | 0, -2.5, -5, -7.5, -10       |  | -12.5 | 16. | 7, 10, 13, 16, 19          |  | 22  |
| 17. | -20, -16, -12, -8, -4        |  | 0     | 18. | 2.1, 3.4, 4.7, 6.0, 7.3    |  | 8.6 |
| 19. | 50, 47, 44, 41, 38           |  | 35    | 20. | -1, 0.5, 2, 3.5, 5         |  | 6.5 |
| 21. | 18, 15.5, 13, 10.5, 8        |  | 5.5   | 22. | -100, -95, -90, -85, -80   |  | -75 |
| 23. | 0.8, 1.6, 2.4, 3.2, 4.0      |  | 4.8   | 24. | 75, 70, 65, 60, 55         |  | 50  |
| 25. | -2.2, -1.1, 0, 1.1, 2.2      |  | 3.3   | 26. | 33, 30, 27, 24, 21         |  | 18  |
| 27. | -50, -45, -40, -35, -30      |  | -25   | 28. | 1.75, 2.5, 3.25, 4.0, 4.75 |  | 5.5 |

29. 90, 87, 84, 81, 78

75

30. -0.5, 0, 0.5, 1.0, 1.5

2.0

## MASTER QUESTIONS



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? 30cm

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? 10:15

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? 20.5cm

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? £312.50

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?  $3.0^{\circ}\text{C}$

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? 8.0 litres

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? 45s

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? £9250

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? 137.5L

**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?

| 115 pages