EXTENDING SEQUENCES GIVEN A TERM AND COMMON DIFFERENCE

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

MAIN QUESTIONS

1. An ascending sequence has a common difference of 3, and a 1st term of 5. Write out the first 5 terms.

   5, 8, 11, 14, 17

2. An ascending sequence has a common difference of 2, and a 2nd term of 7. Write out the first 5 terms.

   5, 7, 9, 11, 13

3. A descending sequence has a common difference of 4, and a 1st term of 20. Write out the first 5 terms.

   20, 16, 12, 8, 4

4. An ascending sequence has a common difference of 5, and a 3rd term of 15. Write out the first 5 terms.

   5, 10, 15, 20, 25

5. A descending sequence has a common difference of 3, and a 2nd term of 14. Write out the first 5 terms.

17, 14, 11, 8, 5

6. An ascending sequence has a common difference of 7, and a 4th term of 29. Write out the first 5 terms.

8, 15, 22, 29, 36

7. A descending sequence has a common difference of 6, and a 3rd term of 24. Write out the first 5 terms.

36, 30, 24, 18, 12

8. An ascending sequence has a common difference of 4, and a 5th term of 25. Write out the first 5 terms.

9, 13, 17, 21, 25

9. A descending sequence has a common difference of 5, and a 4th term of 15. Write out the first 5 terms.

30, 25, 20, 15, 10

10. An ascending sequence has a common difference of 8, and a 2nd term of 12. Write out the first 5 terms.

4, 12, 20, 28, 36

11. A descending sequence has a common difference of 9, and a 1st term of 45. Write out the first 5 terms.

45, 36, 27, 18, 9

12. An ascending sequence has a common difference of 11, and a 3rd term of 33. Write out the first 5 terms.

11, 22, 33, 44, 55

13. A descending sequence has a common difference of 7, and a 5th term of 7. Write out the first 5 terms.

35, 28, 21, 14, 7

14. An ascending sequence has a common difference of 13, and a 4th term of 52. Write out the first 5 terms.

13, 26, 39, 52, 65

15. A descending sequence has a common difference of 10, and a 2nd term of 40. Write out the first 5 terms.

50, 40, 30, 20, 10

16. An ascending sequence has a common difference of 15, and a 5th term of 75. Write out the first 5 terms.

15, 30, 45, 60, 75

17. A descending sequence has a common difference of 12, and a 3rd term of 36. Write out the first 5 terms.

60, 48, 36, 24, 12

18. An ascending sequence has a common difference of 17, and a 4th term of 68. Write out the first 5 terms.

17, 34, 51, 68, 85

19. A descending sequence has a common difference of 14, and a 1st term of 70. Write out the first 5 terms.

70, 56, 42, 28, 14

20. An ascending sequence has a common difference of 19, and a 2nd term of 38. Write out the

MASTER QUESTIONS

M1. A theatre has seating arranged in rows where each row has 4 more seats than the previous row. If the 3rd row has 23 seats, how many seats are in the first 5 rows?

The first 5 rows have 15, 19, 23, 27, and 31 seats respectively

M2. A savings account decreases by £12.50 each month due to regular withdrawals. If the balance was £187.50 after 4 months, what were the balances for the first 5 months?

The balances were £237.50, £225.00, £212.50, £200.00, and £187.50 respectively

M3. The height of a plant increases by 3.2cm each week. If it measured 25.6cm in the 4th week, what were its heights in the first 5 weeks?

The heights were 16.0cm, 19.2cm, 22.4cm, 25.6cm, and 28.8cm respectively

M4. A temperature drops by 2.5°C each hour. If it reads 17.5°C after 3 hours, what were the temperatures for the first 5 hours?

The temperatures were 25.0°C, 22.5°C, 20.0°C, 17.5°C, and 15.0°C respectively

M5. A car's value depreciates by £850 each year. If its value was £12,750 after 2 years, what were its values for the first 5 years?

The values were £14,450, £13,600, £12,750, £11,900, and £11,050 respectively