

Algebra & Sequences: ²Medium Practice Paper

Q1. The n th term of a sequence is $5n - 2$. What is the 6th term?

- A. 23 B. 25 C. 28 D. 30 E. 32

Q2. Solve for x .

$$4x - 3 = 21$$

- A. 4 B. 5 C. 6 D. 8 E. 24

Q3. A sequence begins 7, 12, 17, 22, ... What is the 12th term?

- A. 57 B. 60 C. 62 D. 67 E. 72

Q4. If $x = 4$ and $y = 6$, what is the value of $5x - 2y$?

- A. 2 B. 8 C. 10 D. 14 E. 32

Q5. A sequence starts at 1 and the rule is "double, then add 2". What is the 4th term?

- A. 10 B. 14 C. 18 D. 22 E. 26

Q6. Simplify this expression.

$$6b + 2 + 3b - 5$$

- A. $9b - 3$ B. $9b + 3$ C. $9b - 7$ D. $3b - 3$ E. $6b - 3$

Q7. What is the missing number in this sequence?

$$4, ?, 22, 31$$

- A. 11 B. 12 C. 13 D. 14 E. 15

Q8. Solve for n.

$$5n - 4 = 31$$

- A. 5 B. 6 C. 7 D. 8 E. 9

Q9. A gym charges £20 to join plus £8 for each month. Which expression gives the cost in pounds for m months?

- A. $20 + 8m$ B. $8 + 20m$ C. $28m$ D. $20m + 8m$ E. $160m$

Q10. A sequence starts at 100 and the rule is "subtract 12". Which is the first term below 40?

- A. 5th term B. 6th term C. 7th term D. 8th term E. 9th term

Q11. What is the nth term rule for this sequence?

4, 7, 10, 13

- A. $n + 3$ B. $3n$ C. $3n + 1$ D. $4n - 1$ E. $n + 4$

Q12. If $m = 5$, what is the value of $m^2 - m$?

- A. 0 B. 15 C. 20 D. 25 E. 30

Q13. What is the 9th square number?

- A. 18 B. 45 C. 64 D. 81 E. 99

Q14. Solve for x.

$$x \div 3 + 2 = 6$$

- A. 4 B. 8 C. 12 D. 18 E. 24

Q15. I think of a number, subtract 4 and then multiply by 2. The answer is 18. What was my number?

- A. 9 B. 11 C. 13 D. 14 E. 22