Algebra & Sequences: Medium Practice Paper 1

Q1. The nth term of a sequence is 4n + 1. What is the 5th term?

A. 16 B. 19 C. 20 D. 21 E. 24

Q2. Solve for x.

$$3x + 4 = 19$$

A. 3 B. 5 C. 6 D. 7 E. 15

Q3. A sequence begins 2, 6, 10, 14, ... What is the 10th term?

A. 34 B. 36 C. 38 D. 40 E. 42

Q4. If x = 5 and y = 3, what is the value of 2x + 3y?

A. 16 B. 17 C. 19 D. 21 E. 25

Q5. A sequence starts at 3 and the rule is "multiply by 2, then subtract 1". What is the 4th term?

A. 9 B. 11 C. 15 D. 17 E. 23

Q6. Simplify this expression.

$$4a + 3a - 2a$$

A. 3a B. 5a C. 7a D. 9a E. 24a

Q7. What is the missing number in this sequence?

5, ?, 21, 29

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

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Q8. Solve for n.

$$2n - 7 = 9$$

A. 1 B. 4 C. 8 D. 11 E. 16

Q9. A taxi charges £3 plus £2 for every mile travelled. Which expression gives the cost in pounds of a journey of m miles?

A. 3 + 2m B. 2 + 3m C. 5m D. 3m + 2m E. 6m

Q10. A sequence starts at 40 and the rule is "subtract 6". Which is the first term that is negative?

A. 6th term B. 7th term C. 8th term D. 9th term E. 10th term

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

5, 8, 11, 14

A. n + 3 B. 3n C. 3n + 2 D. 2n + 3 E. 5n − 3

Q12. If $p = 4$, what is the value of $p^2 + 3$?

A. 11 B. 14 C. 15 D. 19 E. 22

Q13. The triangular numbers are 1, 3, 6, 10, 15, ... What is the 7th triangular number?

A. 21 B. 24 C. 26 D. 28 E. 30

Q14. Solve for x.

$$x \div 4 = 7$$

A. 3 B. 11 C. 24 D. 28 E. 32

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Q15. I think of a number, multiply it by 3 and then add 5. The answer is 26. What was my number?

A. 6 B. 7 C. 8 D. 9 E. 11

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