Patterns and Sequences - Worksheet 5

Grade 3 | Mathematics | Ch 3: Patterns and Sequences | Total Marks: 19 | Time: 30 Minutes

Student Name: _____ **Roll / ID No:** _____

Grade / Section: _____ **Date:** _____ **Score:** _____ / 19

Instructions: Section A (Q1-Q4): Choose the correct option (A, B, C, or D). Section B (Q5-Q9): Write your exact one-word or numerical answer. Section C & D (Q10-Q15): Write your detailed answers, corrections, and show all working steps neatly in the space provided.

Q1. Find the next number in the sequence: 21, 28, 35, 42, [?] **[1 Mark]**

( ) A. 49
( ) B. 48
( ) C. 51
( ) D. 56

Q2. Which of the following numbers is an ODD number? **[1 Mark]**

( ) A. 347
( ) B. 348
( ) C. 350
( ) D. 342

Q3. What is the sum of any two odd numbers (e.g., 7 + 11)? **[1 Mark]**

( ) A. Always an even number
( ) B. Always an odd number
( ) C. Sometimes odd, sometimes even
( ) D. Always a multiple of 10

Q4. In a repeating shape pattern with a 3-element core (, ,), what is the 12th shape? **[1 Mark]**

( ) A. (the 3rd shape)
( ) B. (the 1st shape)
( ) C. (the 2nd shape)
( ) D. (a new shape)

Q5. At the Space Colony Solar Array, an engineer places solar panels in rows: Row 1 has 21 panels, Row 2 has 28, Row 3 has 35. How many panels will be installed in Row 5? **[1 Mark]**

Q6. A runner trains by running laps: Day 1 (3 laps), Day 2 (6 laps), Day 3 (9 laps), Day 4 (12 laps). Following this pattern, how many laps will the runner complete on Day 7? **[1 Mark]**

Q7. A library arranges shelves with alternating color stickers: Red, Blue, Green, Yellow, Red, Blue, Green, Yellow... What color sticker is placed on the 26th shelf? **[1 Mark]**

Q8. Find the missing term in the sequence: 21, [?], 35, 42, 49 **[1 Mark]**

Q9. Solve the two-step pattern: 4, 7, 6, 9, 8, 11, [?] **[1 Mark]**

Q10. A student writes: 'The sequence 5, 10, 20, 35, 55 has a rule of adding 5 each **[1 Mark]**
time.' What is the error in this statement?

Q11. Farah claims: 'Because 24 is even and 15 is odd, their product 24 x 15 must be **[1 Mark]**
odd.' What is Farah's mistake?

Q12. Why does adding two odd numbers always produce an even sum? (e.g., 2n+1 + 2m+1) **[2 Marks]**

Q13. In the number sequence starting at 1 where every term adds 2 (1, 3, 5, 7, 9...), **[2 Marks]**
will the number 500 ever appear in this sequence?

Q14. A baker stacks cupcakes in a triangle display: 1 cupcake in top tier, 3 in **[2 Marks]**
second, 6 in third, 10 in fourth, 15 in fifth. How many cupcakes will be in the 7th
tier?

Q15. In a sequence where the rule is 'Multiply by 2 and subtract 1', the first term is **[2 Marks]**
3. What is the 4th term?