WONDERLEARNERZ PRIMARY ACADEMY â€¢ PRACTICE & ASSESSMENT WORKSHEET

Patterns and Sequences: Worksheet 3

Grade 5 | Mathematics | Ch 11: Patterns and Sequences | Total Marks: 19 | Time: 45 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. What is the next number in the arithmetic sequence: 21, 30, 39, 48, [?]? [1 Mark]

( ) A. 57
( ) B. 55
( ) C. 60
( ) D. 66

Q2. Identify the missing term in the sequence of square numbers: 1, 4, 9, 16, [?], 36. [1 Mark]

( ) A. 25
( ) B. 20
( ) C. 24
( ) D. 30

Q3. What is the rule for this sequence: 80, 72, 64, 56, 48? [1 Mark]

( ) A. Subtract 8 each time
( ) B. Subtract 6 each time
( ) C. Divide by 2
( ) D. Subtract 10 each time

Q4. Find the 10th term of the sequence starting at 5 with the rule 'Add 4': 5, 9, 13, 17... [1 Mark]

( ) A. 41
( ) B. 45
( ) C. 37
( ) D. 40

Q5. At the Harbor Marine Terminal, an amphitheater arranges chairs in rows: Row 1 has 18 chairs, Row 2 has 24, Row 3 has 30, and so on. How many chairs are in Row 7? [1 Mark]

Q6. A fitness tracker user logs daily walking goals: Day 1: 4,000 steps, Day 2: 4,500 steps, Day 3: 5,000 steps. What will be the step goal on Day 10? [1 Mark]

Q7. A bacteria culture doubles in population every hour. If there are 15 cells initially, how many cells will exist after 4 hours? [1 Mark]

Q8. Find the missing value in this sequence: 14, 21, [?], 35, 42. **[1 Mark]**

Q9. Fill in the missing number: 3, 6, 12, [?], 48, 96. **[1 Mark]**

Q10. A student writes the sequence of multiples of 9: '9, 18, 27, 35, 45, 54.' **[1 Mark]**
Identify the mistake and provide the correct sequence term.

Q11. Kevin claims: 'The sequence 2, 4, 8, 16 has the rule Add 2.' Explain Kevin's **[1 Mark]**
error and state the true rule.

Q12. Explain the difference between an arithmetic sequence and a geometric sequence **[2 Marks]**
using clear examples.

Q13. How can finding the pattern rule help predict terms far ahead without writing out **[2 Marks]**
every intermediate number?

Q14. Find the sum of the first 6 square numbers: 1Â² + 2Â² + 3Â² + 4Â² + 5Â² + 6Â². **[2 Marks]**

Q15. In a two-step pattern, terms alternate between 'Multiply by 2' and 'Add 3': 2, 4, **[2 Marks]**
7, 14, 17, [?], [?]. What are the next two terms?