Patterns and algorithms - topic test

Name: _____ Date: _____

12 questions | 21 marks | 30 minutes

Number rules, ordered steps, decisions and explained predictions.

No calculator needed.

1. The rule is add 4. Continue 3, 7, 11 with two terms. [2 marks]

2. The rule is multiply by 2. Fill 5, 10, __, 40. [1 mark]

3. Start at 35 and subtract 6 each time. Write four terms. [2 marks]

4. Give a simple constant-multiplication rule for 3, 9, 27, 81. [1 mark]

5. Start at 7. Add 5, then double. [2 marks]

6. Start at 7. Double, then add 5. [2 marks]

7. If the input is even, halve it; otherwise add 3. Use input 14. [1 mark]

8. If the input is even, halve it; otherwise add 3. Use input 9. [1 mark]

9. Start at 2. Add 4 repeatedly. Stop when the result is greater than 14. Give the final number. [2 marks]

10. A display has 5 tiles at step 1 and gains 3 each step. Find step 5. [2 marks]

11. A learner says 12, 17, 22, 28 uses add 5. Identify the error and correct the fourth term. [2 marks]

12. A club starts with 12 dollars and saves 8 each week. It needs 60 dollars. How many weeks are needed? Explain. [3 marks]