Functions & Relationships: Flow Diagrams, Tables and Formulae

MEMORANDUM

Name: ..... Class: .....

Date: .....

MARK ____ / 12

Answer all questions. Show all your working — marks are awarded for method as well as the final answer. **Teacher copy: accept any correct equivalent method.**

1 Rule: × 2 + 5. Find the output when the input is 6. (1)

$6 \times 2 + 5 = \mathbf{17}$ ✓ (1)

2 Rule: $y = 4x - 3$. Find y when $x = 5$. (2)

$20 - 3 = \mathbf{17}$ ✓✓ (2)

3 Rule: $y = 4x - 3$. Find x when $y = 17$. (2)

$4x = 20 \rightarrow \boldsymbol{x = 5}$ ✓✓ (2)

4 Rule: × 10. Complete: 3 → ___ and ___ → 70 (2)

$3 \rightarrow \mathbf{30}$; $\mathbf{7} \rightarrow 70$ ✓✓ (2)

5 Find the rule: 1→3, 2→5, 3→7, 4→9 (2)

Differences of $2 \rightarrow \boldsymbol{y = 2x + 1}$ ✓✓ (2)

6 Find the rule: 1→6, 2→12, 3→18 (1)

$\boldsymbol{y = 6x}$ ✓ (1)

7 Rule: $y = x^2 + 1$. Find y when $x = 4$. (2)

$16 + 1 = \mathbf{17}$ ✓✓ (2)

TOTAL: 12 marks

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