EXAM-STYLE CLASS TEST

MARKS	DURATION	QUESTIONS
34	55 minutes	3

Name: _____ Class: _____

Date: _____

MARK ____ / 34

INSTRUCTIONS AND INFORMATION

1. Answer **ALL** the questions in this question paper.
2. Answer QUESTION 1 by **circling** the letter (A–D) in the answer grid at the end of that section.
3. Show **ALL** calculations clearly.
4. Show all units where applicable.
5. Number the answers correctly according to the numbering system used in this question paper.
6. A non-programmable calculator may be used, unless stated otherwise.
7. Write neatly and legibly.

QUESTION 1 [10 MARKS]

Four options are given as possible answers to the following questions. Choose the correct answer and circle the letter (A–D) in the grid at the end of this section. If you want to change your choice, put a cross through the wrong letter and circle your new choice.

1.1 For $y = 4x - 3$, the value of y when $x = 5$ is ... (1)

A) 20 **B)** 23
C) -17 **D)** 17

1.2 For $y = 4x - 3$, the value of x when $y = 29$ is ... (1)

A) 26 **B)** 113
C) 6,5 **D)** 8

1.3 A flow diagram gives the outputs 1 ; 4 ; 7 ; 10 for the inputs 1 ; 2 ; 3 ; 4. The rule is ... (1)

A) $y = 3x - 2$ **B)** $y = 2x - 1$
C) $y = 3x$ **D)** $y = x + 3$

1.4 In the relationship $y = -2x + 5$, as x INCREASES the value of y ... (1)

A) increases **B)** first rises, then falls
C) decreases **D)** stays the same

1.5 For $y = x^2 - 2$, the value of y when $x = 6$ is ... (1)

A) 34 **B)** 36
C) -38 **D)** 10

1.6 For $y = x^2 - 2$, which TWO inputs give $y = 14$? (1)

A) 8 and -8 **B)** 4 only
C) 4 and -4 **D)** 16 and -16

1.7 Which one of the following tables shows a LINEAR relationship? (1)

A) $1;2;3 \rightarrow 1;4;9$ **B)** $1;2;3 \rightarrow 1;8;27$

C) $1;2;3 \rightarrow 2;4;8$ **D)** $1;2;3 \rightarrow 5;8;11$

1.8 The rule "subtract 4, then multiply by 3" written as a formula is ... (1)

A) $y = 3(x - 4)$ **B)** $y = x - 12$

C) $y = 3x + 4$ **D)** $y = 3x - 4$

1.9 For $y = 3(x - 4)$, the value of y when $x = 4$ is ... (1)

A) -12 **B)** 0

C) 12 **D)** -8

1.10 In $y = mx + c$, the value of y when $x = 0$ is ... (1)

A) $m + c$ **B)** c

C) m **D)** 0

ANSWER GRID — CIRCLE YOUR ANSWERS FOR QUESTION 1

1.1	A	B	C	D
1.2	A	B	C	D
1.3	A	B	C	D
1.4	A	B	C	D
1.5	A	B	C	D
1.6	A	B	C	D
1.7	A	B	C	D
1.8	A	B	C	D
1.9	A	B	C	D
1.10	A	B	C	D

QUESTION 2 [12 MARKS]

Answer the questions below on the relationship $y = 4x - 3$.

2.1 Determine y when $x = 5$, and the value of x for which $y = 29$. (3)

2.2 Determine x when $y = 17$. **(3)**

2.3 Determine the rule, in the form $y = \ldots$, for the table $1 \rightarrow 4$; $2 \rightarrow 7$; $3 \rightarrow 10$. **(3)**

2.4 If $y = x^2 - 2$, determine y when $x = 6$, and the TWO values of x for which $y = 14$. **(3)**

QUESTION 3 [12 MARKS]

The rule for finding the output values in the table below is $y = -2x + 5$.

x	-2	0	4	8
y				

3.1 Complete the table by determining the four output values. **(4)**

3.2 Write the rule in words, and hence write down the output value when the input is 0. **(3)**

3.3 Determine the value of x for which $y = 0$. **(3)**

3.4 State whether the output values increase or decrease as x increases, and give a reason. **(2)**

TOTAL: 34 marks

This question paper consists of 3 questions.

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