EXAM-STYLE CLASS TEST

MARKS	DURATION	QUESTIONS
36	55 minutes	3

Name: _____ Class: _____

Date: _____

MARK _____ / 36

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 Which one of the following shows the ASSOCIATIVE property of addition? (1)

A) $2 + 5 = 5 + 2$
B) $(2 + 5) + 3 = 2 + (5 + 3)$
C) $2 \times (5 + 3) = 2 \times 5 + 2 \times 3$
D) $2 + 0 = 2$

1.2 The additive inverse of -9 is ... (1)

A) 0
B) $\frac{1}{9}$
C) -9
D) 9

1.3 The multiplicative inverse of $\frac{2}{3}$ is ... (1)

A) 0
B) $\frac{2}{3}$
C) $\frac{3}{2}$
D) $-\frac{2}{3}$

1.4 Which one of the following operations is NOT commutative? (1)

A) multiplication
B) subtraction
C) none of them
D) addition

1.5 Which number is its own MULTIPLICATIVE inverse as well as its own additive inverse? (1)

A) none of them
B) 0
C) 1
D) -1

1.6 $2 \times (7 + 3) = 2 \times 7 + 2 \times 3$ shows the ... property. (1)

A) commutative **B)** associative

C) identity **D)** distributive

1.7 Which one of the following is the IDENTITY element for multiplication? (1)

A) 1 **B)** the number itself

C) 0 **D)** -1

1.8 If $a - b = b - a$, then ... (1)

A) it is true for all a and b **B)** a must be 0

C) a must equal b **D)** it is never true

1.9 The sum of an integer and its additive inverse is always ... (1)

A) 0 **B)** double the number

C) 1 **D)** negative

1.10 Dividing by a number is the same as multiplying by its ... (1)

A) square **B)** opposite sign

C) multiplicative inverse **D)** additive inverse

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 [13 MARKS]

Answer the questions below on the properties of integers.

2.1 Name the property shown by $(-6) \times 3 = 3 \times (-6)$, and show by ONE example that division is NOT commutative. (3)

2.2 Name the property shown by $(2 + (-5)) + 4 = 2 + ((-5) + 4)$, and calculate the value of EACH side to show that it holds. **(3)**

2.3 Use the distributive property to calculate $(-5) \times (20 + 3)$, and check your answer by working out the bracket first. **(4)**

2.4 Write down the additive inverse of -11 and the multiplicative inverse of -6. **(3)**

QUESTION 3 [13 MARKS]

Answer the questions below. Give a reason or an example wherever one is asked for.

3.1 Is subtraction commutative? Give a reason and support it with an example using integers. **(3)**

3.2 Is division associative? Test it with $(24 \div 6) \div 2$ and $24 \div (6 \div 2)$. **(4)**

3.3 Zanele says the multiplicative inverse of a number is always smaller than the number. Give ONE example that shows she is wrong, and state for which numbers her statement IS true. **(3)**

3.4 Write down the number that is its own additive inverse, and the TWO numbers that are their own multiplicative inverses. **(3)**

TOTAL: 36 marks

This question paper consists of 3 questions.

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