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LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

DEPARTMENT OF
EDUCATION

CAPRICORN NORTH DISTRICT

MATHEMATICS

GRADE 8

TERM 1

CONTROLLED TEST

MARCH 2026

MARKS: 60

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NAME AND SURNAME	
SCHOOL	
CLASS	
DATE	
DURATION	2 HOURS

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INSTRUCTIONS

1. This question paper is also your answer book. Write your name, surname, and class on the space provided.
2. The paper consists of 9 pages, including the cover page.
3. The question paper has 5 questions. Answer ALL questions
4. Clearly show ALL calculations, Diagrams, and graphs that you may use in determining your answers.
5. ANSWERS ONLY will not necessarily be awarded full marks.
6. Number the answers correctly according to the numbering system used in this question paper.
7. A clear presentation of work will count in the candidate's Favor.
8. ***(hint:*** $A=p(1+in)$***)***



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QUESTION 1

Circle the correct answer:

1.1 Name the property shown by the following statement. $a(bc) = (ab)c$

A. Commutative Property
B. Associative Property
C. Distributive Property
D. Identity Property of Multiplication

1.2 The value of $(\frac{3}{7})^2$ (1)

A. $\frac{9}{49}$
B. $\frac{6}{18}$
C. $\frac{9}{7}$
D. $\frac{3}{49}$

1.3 Calculate $(0.3)^2$ (1)

A. 0.3
B. 0.9
C. 0.6
D. 0.09

1.4 Arrange these numbers in descending order: (1)
$-19; 33; 21; -52; -47; -8$

A. $-8; -19; 21; 33; -52; -47$
B. $33; 21; -8; -19; -47; -52$
C. $-52; -47; -19; -8; 21; 33$
D. $21; 33; -47; -52; -8; -19$

1.5 What is the HCF of the following numbers: 78, 104 and 156 (1)

A. 2
B. 20
C. 12
D. 26

1.6 Calculate $\sqrt[3]{-216}$ without using a calculator (1)

A. -6
B. 6
C. 9
D. 8

1.7 Find the next two terms in the following sequence: $3; 10; 17$ (1)

A. 18; 19
B. 21;28
C. 24;31
D. 20;23

1.8 If R1,00 is equal to £0.08, calculate how many pounds would you get for R5153,65 (1)

A. £569,90
B. R412,29
C. R789,67
D. £586.23

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1.9 Write the ratio 120:80:72 in the simplest form (1)

A. 20:40:36
B. 12:10:3
C. 24:9:16
D. 15:10:9

1.10 Identify the expression that represents the Multiplicative Property of Zero (1)

A. $-9 \times 0 = 0$
B. $-9 \times 9 = 0$
C. $9 \times 9 = 0$
D. $9 + 0 = 9$

[10]

QUESTION 2

2.1 (2)

2.1.1 Write 114 as a product of prime factors.

	114



2.1.2 Determine the L.C.M of 114 and 60 using any method (2)

2.2 A car travels at 80 km/h. How long does it take to travel 320 km (2)

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2.3 Calculate the following by long division method

$8374 \div 24$ (3)

2.4 Vincent buys furniture worth R18 000 on hire purchase. He pays a R5 000 deposit and repays the balance, plus 20% per annum simple interest, in monthly instalments, over 3 years. Calculate his monthly payment. ***Hint***: $A = P(1 + in)$ (4)

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[13]

QUESTION 3

3.1 Calculate the following:

3.1.1 $1\frac{9}{15} + 2\frac{3}{5}$ (3)

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3.1.2 $\frac{6}{13} \div \frac{6}{5}$ (2)

3.1.3 $\sqrt[3]{\frac{1}{8} - (\frac{1}{6} + \frac{4}{9})}$ (3)

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3.1.4 $92\%\ of\ 180$ (2)

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3.2 The price of a laptop is decreased by 5%. Calculate the new price if the old price was R10100. (3)

3.3 Arrange in descending order: $-2.702; 3.2; -2.72; 3.15; 0; -3$ (1)

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3.4 Calculate: 2.242×2.515 (2)

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QUESTION 4

4.1 Say whether the following statements are true or false

4.1.1 $42 - (16 + 28) = 28 - (16 + 42)$:_____ (1)

4.1.2 b) $(-3) \times 12 = 12 \times (-3)$:_____ (1)

4.2 Calculate the following without using a calculator

a) $(12 - 8) \times (4 - 7)$ (2)

b) $6 - (-3) + \sqrt{36}$ (3)

c) $\frac{-(-2)+\sqrt{(-2)^2-4(-1)(3)}}{2(-1)}$ (4)

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QUESTION 5

5.1 write down the next three terms.

$-6;\ -3;\ 2;\ 9$_____;_____;_____ (1)

5.2 $T_n = 7n - 5$ is the *n*th term of a number pattern (sequence).

5.2.1 Determine the 100th term (1)

5.2.2 Which term is equal to 37? (2)

5.3 Study geometric pattern and answer the questions that follow:



5.3.1 Draw the next picture (1)



5.3.2 Write the rule to determine the number of dots making up the nth picture (2)

5.3.3 Calculate the number of dots that will be in the making up the 32nd picture (3)

[10]

TOTAL: 60

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		Question 1	
1.1.	1.1.	C B A A D	√ √ √ √ √ [5]
		Question 2	
2.1	2.1.1.	$2 \times 2 \times 2 \times 3 \times 3 \times 7$	√ √
	2.1.2.	$2 \times 2 \times 2 \times 3 \times 3 \times 7$ $2 \times 2 \times 2 \times 3 \times 7 \times 7$ $2 \times 2 \times 2 \times 3 \times 7 = 168$ *is HCF*	 √ √
2.2	2.1.1.	$2; 3; 5$	√
	2.1.2	$2 + 3 + 5 = 10$ $\frac{40}{10} = 4$ $Mapula = 2 \times 4 = 8$ *apples* $Thato = 3 \times 4 = 12$ *apples* $Knowledge = 4 \times 5 = 20$ *apples*	√ √ √ √
2.4.		$4.6l = 100km$ $xl = 550km$ *cross multiplication* $\frac{(100)(x)}{100} = \frac{(4.6)(550)}{100}$ $x = 25.3l$ to cover the 550km	 √ √ √ [3]
		Question 3	
3.1.		$A = P(1+i)^n$ $A = 5000(1 + \frac{10}{100})^3$ $A = R6655.00$	 √ √ √
3.2.		Monthly payment = 6655/12x3 =R184.86	 √ √
		Question 4	
4.1.		$4 - \sqrt{36} \times \sqrt[3]{8}$ $= 4 - 6 \times 2$ $= 4 - 12$ $= -8$	 √ √ [2]
4.2.		$8 + 9 \times 10 \div (3 + 7)$ $= 8 + 9 \times 10 \div 10$ $= 8 + 9 \times 1$ $= 8 + 9$ $= 17$	√ √ [2]

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4.3		$3 + 5 - 10 = -2\ points$	√√
		Question 5	
	5.1.	x^{3+5} x^{8}	√ √
	5.2.	$= 5y^{4-3}$ $= 5y$	√ √ √ [3]
	5.3.	$6x^{6} + 6x^{6}$ $= 12x^{6}$	√√ √ [3]
	5.4.	$(1 \times 1)^{-3}$ =1	√ √
	5.5.1	$3^{2x} = 3^{4}$ $2x = 4$ $x = 2$	√ √ √
	5.5.2	$2.7^{2x} = 98$ $7^{2x} = 47$ $7^{2x} = 7^{2}$ $2x = 2$ $x = 1$	 √ √ √
		Question 6	
6.1.	a.	-14; -17;	√√ [2]
	b.	Common difference is -3 $Tn = -3n + 3 - 2$ $Tn = -3n + 1$	√ √ √ [3]
	c.	$T20 = -3(20) + 1$ $= -61$	√ substitution √√ [3]
6.2	a.	The next picture will contain 22 black squares	√[1]
	b.	7; 12; 17; 22 Common difference is 5 $Tn = 5n - 5 + 7$ $Tn = 5n + 2$	√ for pattern √ √ √ [3]
		Question 7	
		9 3 0 -3 -9	√√√√

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		Question 8	
	8.1.1.	4	√
	8.1.2.	+7	√
	8.1.3.	$2(2)^2 - 8(2)(-1) - 9(-1)^2 + 7$ $=$	√√ √
	8.2.1	$x^2 + 2x + x + 2$ $x^2 + 3x + 2$	√ √
	8.2.2	$(x-2)(x-2)$ $x^2 - 4x + 4$	√ √

