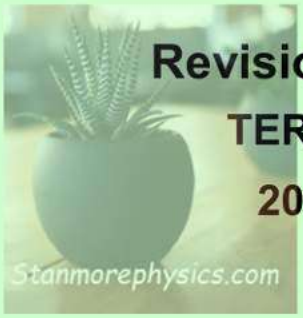
GAUTENG PROVINCE
EDUCATION
REPUBLIC OF SOUTH AFRICA



Revision Test
TERM 1
2025

GRADE 8

MATHEMATICS

EXAMINER:

MODERATOR:

MARKS: 50

TIME: 1 HOUR

This question paper consists of 5 pages.

MATHEMATICS

INSTRUCTIONS AND INFORMATION

1. This question paper consists of **SECTION** A and **SECTION B** based on the prescribed content framework in the CAPS document.

   SECTION A: MULTIPLE CHOICE

   QUESTION 1: 5 MULTIPLE CHOICE QUESTIONS.

   SECTION B: FOUR QUESTIONS BASED ON COVERED TOPICS

   QUESTION 2: WHOLE NUMBERS.

   QUESTION 3: INTEGERS.

   QUESTION 4: COMMON FRACTIONS.

   QUESTION 5: DECIMAL FRACTIONS.

2. Answer ALL questions in both SECTIONS.
3. A non-programmable calculator may be used unless otherwise stated.
4. In **SECTION A choose the correct letter.**
5. In **SECTION B** show all necessary steps in your working unless otherwise stated.
6. When answering questions, candidates must apply their knowledge, skills, and insight.
7. Number the answers correctly according to the numbering system used in this question paper.
8. Write neatly and legibly.

QUESTION 1

FOR EACH QUESTION, CHOOSE THE CORRECT LETTER OF THE CORRECT ANSWER.

1.1	Which of the following best describes the Commutative Property of Addition for whole numbers? A. $a + b = b + a$ for any whole numbers a and b B. $a + b = a - b$ for any whole numbers a and b C. $a + b = a \times b$ for any whole numbers a and b D. $a + 0 = a$ for any whole number a		(1)
1.2	Which of the following is the prime factorisation of 144? A. $2 \times 3 \times 5^2$ B. $2 \times 3 \times 5$ C. $3^2 \times 2^4$ D. $2^2 \times 3$		(1)
1.3	Which of the following is the additive inverse of 12? A. 12 B. -12 C. 1 D. 0		(1)
1.4	To divide $\frac{1}{2}$ by $\frac{3}{4}$, what should you do? A. Multiply $\frac{1}{2}$ by $\frac{3}{4}$. B. Multiply $\frac{1}{2}$ by the reciprocal of $\frac{3}{4}$. C. Add $\frac{1}{2}$ and $\frac{3}{4}$. D. Subtract $\frac{1}{2}$ from $\frac{3}{4}$.		(1)

1.5	What is the product of $3{,}4 \times 2{,}5$ A. 9,0 B. 7,0 C. 7,5 D. 8,5		(1)
			[5]
QUESTION 2: WHOLE NUMBERS			
2.1.	Calculate: $520 + 180 - 350$		(2)
2.2	Determine the Lowest Common Multiple (LCM) and Highest Common Factor (HCF) of 18 and 24.		(3)
2.3	Share R6 496 in the ratio 2 : 3 : 9		(4)
2.4	A car is bought on hire purchase for \$10,000 for a period of 3 years. The hire purchase price includes a 10% interest. What is the monthly repayment to be paid for the car in Rands(R)? **Hint: $1\$ = \boldsymbol{R18,48}$**		(5)
			[14]
QUESTION 3: INTEGERS (Use of calculator is prohibited)			
3.1.	Calculate: $-6 - 2 \times 4 \div 2$		(2)
3.2	Simplify: $(-12) \div 3 + 4 \times (-5)$		(2)
3.3	Simplify: $3 \times (-4 + 5)$		(3)
3.4	Simplify: $\frac{\sqrt[3]{125} - 3^2 + 0 + 1}{-4 + \sqrt{121} - \sqrt[3]{64}}$		(4)
			[11]
QUESTION 4: COMMON FRACTIONS (Use of calculator is prohibited)			
4.1.	Simplify: $2 \div \frac{1}{2}$		(2)
4.2.	Simplify: $(\frac{2}{3})^3$		(3)

4.3	A jacket originally costs R800. If the price is increased by 15%, what is the new price of the jacket?		(2)
4.4	Emma has $3\frac{1}{2}$ metres of fabric. She wants to cut the fabric into pieces that are each $\frac{1}{4}$ metre long. How many pieces can she cut?		(4)
			[11]
QUESTION 5: DECIMAL FRACTIONS			
5.1.	Calculate **(Use of calculator is prohibited)**: $1{,}25 \times 0{,}6$		(2)
5.2.	Divide 8,64 by 1,2**(Use of calculator is prohibited)**		(3)
5.3	A store offers a 15% discount on an item that originally costs R75.99. After applying the discount, VAT of 15 % is added to the discounted price. What is the final price of the jacket after the discount and VAT?		(4)
			[9]

Total	**50 Marks**

GAUTENG PROVINCE
EDUCATION
REPUBLIC OF SOUTH AFRICA

Marking Guideline

Revision Test

TERM 1

2025

GRADE 9

MATHEMATICS

EXAMINER:

MODERATOR:

MARKS: 50

TIME: 1 HOUR

This marking guideline consists of 7 pages.

MATHEMATICS

INSTRUCTIONS AND INFORMATION

1. Give full marks for answers only, unless stated otherwise.

2. Accept any alternate correct solutions that are not included in the marking guideline.

3. Underline errors committed by learners and apply Consistent Accuracy (CA).

KEYS	
M	Method
CA	Consistent Accuracy
A	Accuracy
S	Statement
SF	Substitution in Formula
R	Reason
S/R	Statement and Reason

QUESTION 1

FOR EACH QUESTION, CHOOSE THE CORRECT LETTER OF THE CORRECT ANSWER.

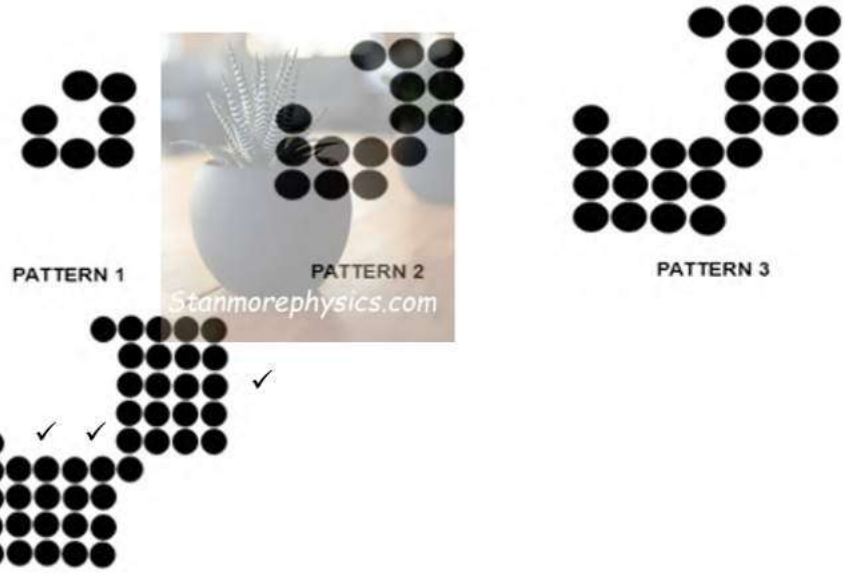
1.1	Which number is undefined? A. $\frac{0}{8}$ B. $\sqrt{8}$ C. $\sqrt{-8}$ D. $\frac{8}{0}$		(1)
1.2	$(-a \times b)(e \times -g)$ Which of the following expressions is an example of the commutative property? A. $(-a + e) + (b - g)$ B. $(-a - g) \times (b \times e)$ C. $(-a \times e)(b \times -g)$ D. $(-a + b)(e - g)$		(1)
1.3	Simplify: $3n^3 \times 2n^2$ A. $6n^5$ B. $5n^5$ C. $6n^6$ D. $5n^6$		(1)
1.4	In scientific notation is $4 \times 10^{12} \times 7 \times 10^7 =$ A. 28×10^{20} B. $2{,}8 \times 10^{18}$ C. $2{,}8 \times 10^{20}$ D. $0{,}28 \times 10^{18}$		(1)
1.5	The next number in the sequence 3; 6; 11; 18; … is A. 25 B. 24 C. 26 D. 27		(1)
			[5]

QUESTION 2: WHOLE NUMBERS

2.1.	List the first four multiples of 12. 12; 24; 36; 48; 60 ✓ ✓		(2)
2. 2.	Calculate what R10 000 will amount to if it is invested at 10 % per annum compound interest for 3 years.		(3)

	$A = P(1+i)^n$ ✓ $= R10\,000(1+0{,}1)^3$ ✓ $= R13\,310$ ✓ OR $A = P(1+\frac{r}{100})^n$ ✓ $= R10\,000(1+\frac{10}{100})^3$ ✓ $= R13\,310$ ✓ OR $First\ year: R10\,000 + R10\,000 \times 0{,}1 = R11\,000$ ✓ $Second\ year:\ R11000 + R11000 \times 0{,}1 = R12100$ ✓ $Third\ year:\ R12100 + R12100 \times 0{,}1 = R13310$ ✓		
2.3	If two cardboard boxes occupy 500 cubic centimetres of space, then how much space is required to keep 200 such boxes? Solution: Given, 2 cardboard boxes occupy 500 cubic centimetres. Space required for 200 boxes = ? As the number of boxes increases, the space required to keep them increases, ✓ so this is a case of direct proportion. ✓ Let x cubic centimetres be the required space. So, $\frac{2}{500} = \frac{200}{x}$ $2x = 200 \times 500$ ✓ $x = \frac{200 \times 500}{2}$ ✓ = 50,000 ✓		(5)
			[10]
QUESTION 3: INTEGERS			
3.1.	Simplify without using a calculator: $6-(3-5)+9-15\div 3$ $= 6-(-2)+9-5$ $= 6+2+9-5 = 12$ ✓		(1)
3.2	Simplify without using a calculator: $\frac{3\times 7}{-3}$ $= \frac{21}{-3}$ ✓		(2)

	$= -7$ ✓		
3.3	Simplify without using a calculator: $-11 \times 8 + 42 \div (-7)$ $= -88 + (-6)$ ✓ ✓ $= -88 - 6$ ✓ $= -94$ ✓		(4)
3.4	Simplify without using a calculator: $\frac{\sqrt[3]{125} - 3^2 + 0 + 1}{-4 + \sqrt{121} - \sqrt[3]{64}}$ $= \frac{5 - 9 + 1}{-4 + 11 - 4}$ ✓ ✓ ✓ $= \frac{-3}{3}$ $= -1$ ✓		(5)
			[12]
QUESTION 4: EXPONENTS			
4.1.	Simplify: $(-2x^2y)^3$		(3)
4.2.	Simplify the following expression without using the calculator: $(-2)^3 \times \left(\frac{3^2}{(-3)^2}\right) + ((-4)^2 \div ((-2)^3) - (-5^2 \times (-3)^2)$ $= -8 \times \left(\frac{9}{9}\right) + (16 \div (-8) - (-25 \times 9))$ ✓ $= -8 + ((-2) - (-225))$ ✓ $= -8 + (-2 + 225)$ $= -8 + 223$ ✓ $= 215$ ✓		(4)
4.3.	Simplify: $\frac{\sqrt{4x^6y^{-2}} \times (x^2)^{-2}}{(2x)^0 \times y^{-3}}$ $= 2x^{3-4}y^{-1+3}$ ✓ ✓ $= 2x^{-1}y^2$ ✓ $= \frac{2y^2}{x}$ ✓		(4)

			[11]
QUESTION 5: NUMERIC AND GEOMETRIC PATTERNS			
5.1.	Write down the next two terms of the following sequence: 2; 4; 8; 16; **32; 64** ✓ ✓		(2)
5.2.	Investigate the following patterns below and draw pattern 4.  ✓ ✓ ✓		(3)
5.3.	What are the next two terms in the sequence below? Explain how you got them? 0; 1; 2; 3; 5; **8; 13** ✓ ✓ Add the previous two terms to determine the next term. (Fibonacci) ✓		(3)
5.4	$\frac{1}{2}; \frac{3}{2}; \frac{5}{2}; \frac{7}{2}; \ldots$ Describe the rule and write the general term in the form($T_n = \cdots$ of the given sequence above. Add 1 to the previous term to get the next term. ✓✓ $T_1 = 1(1) - \frac{1}{2} = \frac{1}{2};$ $T_2 = 1(2) - \frac{1}{2} = \frac{3}{2};$ $T_3 = 1(3) - \frac{1}{2} = \frac{5}{2}; \ldots .;$ $T_n = 1(n) - \frac{1}{2} = n - \frac{1}{2} = \frac{2n-1}{2}$ ✓✓ 		(4)
			[12]

Total	50 Marks

GAUTENG PROVINCE
EDUCATION
REPUBLIC OF SOUTH AFRICA

Marking Guideline

Controlled Test

TERM 1

2025

GRADE 8

MATHEMATICS

EXAMINER:

MODERATOR:

MARKS: 50

TIME: 1 HOUR

This marking guideline of consists of 9 pages.

MATHEMATICS

INSTRUCTIONS AND INFORMATION

INSTRUCTIONS AND INFORMATION

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2. Accept any alternate correct solutions that are not included in the marking guideline.
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QUESTION 1

FOR EACH QUESTION, CHOOSE THE CORRECT LETTER OF THE CORRECT ANSWER.

1.1	Which of the following best describes the Commutative Property of Addition for whole numbers? **A. a + b = b + a for any whole numbers a and b** B. a + b = a - b for any whole numbers a and b C. a + b = a × b for any whole numbers a and b D. a + 0 = a for any whole number a		(1)
1.2	Which of the following is the prime factorisation of 144? A. $2 \times 3 \times 5^2$ B. $2 \times 3 \times 5$ C. $3^2 \times 2^4$ **D. $2^2 \times 3$**		(1)
1.3	Which of the following is the additive inverse of 12? A. 12 **B. -12** C. 1 D. 0		(1)
1.4	To divide $\frac{1}{2}$ by $\frac{3}{4}$, what should you do? A. Multiply $\frac{1}{2}$ by $\frac{3}{4}$. **B. Multiply $\frac{1}{2}$ by the reciprocal of $\frac{3}{4}$.** C. Add $\frac{1}{2}$ and $\frac{3}{4}$. D. Subtract $\frac{1}{2}$ from $\frac{3}{4}$.		(1)

1.5	What is the product of $3{,}4 \times 2{,}5$ A. 9,0 B. 7,0 C. 7,5 D. 8,5		(1)
			[5]
QUESTION 2: WHOLE NUMBERS			
2.1.	Calculate: $520 + 180 - 350$ $= 700 - 350$ ✓ $= 350$ ✓ *or* $\begin{array}{r} 520 \\ +\ 180 \\ -\ 350 \\ \hline 350 \end{array}$ ✓✓		(2)
2.2	Determine the Lowest Common Multiple (LCM) and Highest Common Factor (HCF) of 18 and 24. *Inspection* $M_{18}: 18; 36; 54; 72; \ldots..$ $M_{24}: 24; 48; 72, \ldots.$ $\therefore LCM = 72$ ✓ *and* $F_{18}: 1; 2; 3; 6; 9; 18$ $F_{24}: 1; 2; 3; 4; 6; 8; 12; 24$ } ✓ $\therefore HCF = 6$ ✓ *Prime Factorisation* $18 = 2 \times 3 \times 3$ $24 = 2 \times 2 \times 2 \times 3$ } ✓ $\therefore LCM = 2 \times 2 \times 2 \times 3 \times 3 = 72$ ✓ *and* $HCF = 2 \times 3 = 6$ ✓		(3)
2.3	Share R6 496 in the ratio 2 : 3 : 9 $Total\ parts = 2 + 3 + 9 = 14$ ✓ $\therefore \frac{2}{14} \times R6496$ $= R928;$ ✓ $\frac{3}{14} \times R6496$ ✓		(4)

	$= R1392;$ $\frac{9}{14} \times R6496$ $= R4176$ ✓		
2.4	A car is bought on hire purchase for \$10,000 for a period of 3 years. The hire purchase price includes a 10% interest. What is the monthly repayment to be paid for the car in Rands(R)? **Hint: $1\$ = R18,48$** $Convert\ Dollars(\$)\ into\ Rands$ $10\ 000 \times 18{,}48 = R184\ 800$ ✓ $10\%\ interest\ \frac{10}{100} \times R184\ 800$ ✓ $= R18\ 480$ $\therefore HP\ Amount = R184\ 800 + R18\ 480$ ✓ $= R203\ 280$ $Monthly\ repayment = \frac{R203\ 280}{36}$ ✓ $= R5\ 646{,}67$ ✓		(5)
			[14]
QUESTION 3: INTEGERS (Use of calculator is prohibited)			
3.1.	Calculate: $-6 - 2 \times 4 \div 2$ $= -6 - 8 \div 2$ ✓ $= -6 - 4$ $= -10$ ✓		(2)
3.2	Simplify: $(-12) \div 3 + 4 \times (-5)$ $= -4 + (-20)$ ✓ $= -24$ ✓		(2)
3.3	Simplify: $3 \times (-4 + 5)$ $= 3(-4) + 3(5)$ ✓ $= -12 + 15$ ✓ $= 3$ ✓		(3)

3.4	Simplify: $\frac{\sqrt[3]{125} - 3^2 + 0 + 1}{-4 + \sqrt{121} - \sqrt[3]{64}}$ $= \frac{5 - 9 + 1}{-4 + 11 - 4}$ ✓ $= \frac{-3}{3}$ ✓ $= -1$ ✓		(4)
			[11]
QUESTION 4: COMMON FRACTIONS (Use of calculator is prohibited)			
4.1.	Simplify: $2 \div \frac{1}{2}$ $= 2 \times \frac{2}{1}$ ✓ $= 4$ ✓		(2)
4.2.	Simplify: $\left(\frac{2}{3}\right)^3$ $= \frac{2}{3} \times \frac{2}{3} \times \frac{2}{3}$ ✓ $= \frac{8}{27}$ ✓ ✓		(3)
4.3	A jacket originally costs R800. If the price is increased by 15%, what is the new price of the jacket? $\frac{15}{100} \times R800 = R120$ ✓ $\therefore New\ price = R800 + R120$ $= R920$ ✓		(2)

4.4	Emma has $3\frac{1}{2}$ metres of fabric. She wants to cut the fabric into pieces that are each $\frac{1}{4}$ metre long. How many pieces can she cut? Solution Convert $3\frac{1}{2} = \frac{7}{2}$; ✓ now divide by $\frac{1}{4}$(multiply by reciprocal) $\frac{7}{2} \times \frac{4}{1}$ ✓✓ $= \frac{28}{2}$ $= 14\ pieces$ ✓		(4)
			[11]
QUESTION 5: DECIMAL FRACTIONS			
5.1.	Calculate **(Use of calculator is prohibited)**: $1{,}25 \times 0{,}6 = \frac{1{,}25\times100}{100} \times \frac{0{,}6\times10}{10}$ ✓ $= \frac{125}{100} \times \frac{6}{10}$ $= \frac{750}{1000}$ $= \frac{3}{4}$ $= 0{,}75$ ✓ *or* *treat decimal as whole* $\therefore 125 \times 6 = 750$ ✓ *there are three digits after comma move three decimal places to the left from the last digit* $\therefore 0{,}75$ ✓		(2)
5.2.	Divide 8,64 by 1,2**(Use of calculator is prohibited)** $(8{,}64 \times 100) \div (1{,}2 \times 100)$ ✓ $= 864 \div 120$ $= 7\frac{24}{120}$ ✓ $= 7\frac{1}{5}$ $= 7{,}2$ ✓		(3)

5.3	A store offers a 15% discount on an item that originally costs R75.99. After applying the discount, VAT of 15 % is added to the discounted price. What is the final price of the jacket after the discount and VAT? $Discount = \frac{15}{100} \times R75{,}99$ $= 11{,}3985$ ✓ $\therefore R75{,}99 - 11{,}3985$ $= R64{,}5915$ ✓ $VAT\ on\ discounted\ amount = \frac{15}{100} \times R64{,}5915$ $= R9{,}688725$ ✓ $\therefore Final\ price = R64{,}5915 + R9{,}688725$ $= R74{,}280225 \approx R74{,}28$ ✓		(4)
			[9]

Total	**50 Marks**