



**LIMPOPO**

PROVINCIAL GOVERNMENT  
REPUBLIC OF SOUTH AFRICA



**DEPARTMENT OF EDUCATION**

**MOPANI WEST DISTRICT**

**SENIOR PHASE**

**GRADE 8**

**MATHEMATICS**

**QUESTION PAPER**

**TERM 1 CONTROLLED TEST**

**MARKS: 50**

**DURATION: 1.5 HOURS**

**12 MARCH 2024**

*Stanmorephysics.com*

**This question paper consists of 4 pages INCLUDING COVER PAGE**

## Instructions

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Read the questions below before answering this question paper:

1. Answer all questions.
2. Show ALL calculations which you have used in determining the answers.
3. Number your answers correctly according to the numbering system used in this question paper.
4. Write legibly and neatly

### Question 1

MARKS: 10

#### NUMBERS, OPERATIONS AND RELATIONSHIPS

1.1. Choose the correct answer and write only the letter

1.1.1. The lowest common multiple of 8 and 12 is: (1)

- A 32
- B 24
- C 16
- D 12

1.1.2. The ratio 18:12:30 in its simplest form is: (1)

- A 3:2:5
- B 5:2:3
- C 2:5:3
- D 3:5:2

1.1.3. 2700 as a product of its prime factors is: (1)

- A  $2^2 \times 3^3 \times 5^2$
- B  $2^3 \times 3^2$
- C  $2^4 \times 4^2 \times 7^3$
- D  $2^3 \times 5^2$



1.1.4.  $(5 - 3) + (2 \times 3) \div 3$  (1)

- A -8
- B 4
- C 13
- D 2

1.1.5. 15% VAT is added to the price of a pot plant which is R12. How much will it cost after VAT is added? (1)

- A R13, 80
- B R15, 00
- C R12.50
- D R14.80

1.2. State whether the following are TRUE or FALSE

1.2.1.  $-56 \div -7 = 16$  (1)

1.2.2.  $\frac{5}{12} > \frac{3}{8}$  (1)

1.2.3. The fraction  $\frac{5}{9}; \frac{2}{3}; \frac{7}{9}; \frac{2}{18}$  is in ascending order (1)

1.2.4. 25% of 440 is 110 (1)

1.2.5. 0.89631 to two decimal places is 0.90 (1)

**Question 2**

**MARKS: 16**

**NUMBERS, OPERATIONS AND RELATIONSHIPS**

2.1. Work out without a calculator

2.1.1.  $332 - 141$  (1)

2.1.2.  $472 \times 8$  (1)

2.2. Calculate the following:

2.2.1.  $2 \times 12 \div 3 + 1$  (2)

2.2.2.  $2 \times 12 \div (3 + 1)$  (2)

2.3. Fill in the missing signs  $<$ ,  $>$  or  $=$

2.3.1.  $\frac{5}{20} \square \frac{3}{9}$  (1)

2.3.2.  $-7 \square -3$  (1)

2.4.

2.4.1. Use the ladder method to write 1800; 375 and 300 as a product of their prime Factors. (4)

2.4.2. Determine the HCF of 1800; 375 and 300 (2)

2.4.3. Find the LCM of 1800; 375 and 300 (2)

**Question 3****MARKS: 11****NUMBERS, OPERATIONS AND RELATIONSHIPS**

3.1. Complete the table below

(3)

Common fraction	Decimal fraction	Percentage
$\frac{1}{4}$		25%
	0,01	

3.2. Calculate  $3\frac{1}{2} - 2\frac{3}{4} + 1\frac{1}{8}$ 

(3)

3.3. Increase 20 in the ratio 3:4

(1)

3.4. Decrease 32 in the ratio 3:4

(1)

3.5. When cooking rice the ratio of rice to water is 1:2. How many cups of water should be used for 12 cups of rice

(3)

**Question 4****MARKS: 13****NUMBERS, OPERATIONS AND RELATIONSHIPS**

4.1. A pair of jeans priced at R550 is put on sale for 25% discount. How much is the new price? (2)

4.2. Mrs Tate saves a lump sum of R50 000 for her daughter's university fees. If her money is invested for five years on simple interest option of 5% per annum, how much pay-out will she receive at the end of five years? (3)

4.3. Mpho buys a couch for R6 000 on a hire purchase agreement. The agreement states that 10% deposit is required and the balance is to be paid off at an interest rate of 8.5% p.a. simple interest on the full amount of the loan over 3 years. Determine

4.3.1. The amount that must be paid as a cash deposit. (2)

4.3.2. The remaining amount that must be taken as loan (1)

4.3.3. The equal monthly payments that must be made over 3 years. (3)

4.3.4. The actual amount that Mpho pays for the couch (2)



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**MATHEMATICS  
MEMORANDUM  
MARCH 2024**

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**Question 1**

**MARKS: 10**

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**NUMBERS, OPERATIONS AND RELATIONSHIPS**

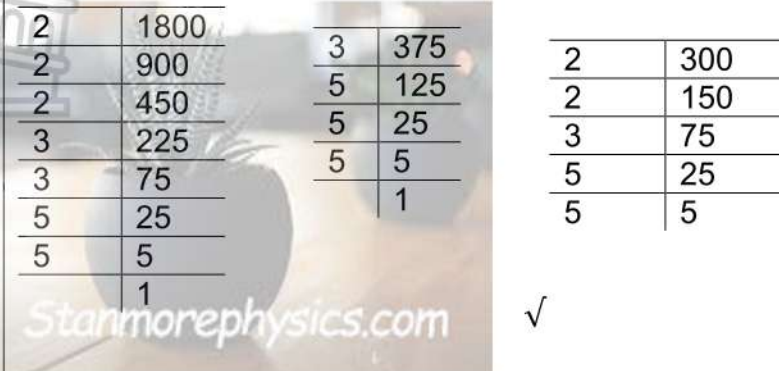
1.1.1	B ✓	01
1.1.2	A ✓	01
1.1.3	A ✓	01
1.1.4	B ✓	01
1.1.5	A ✓	01
1.2.1	FALSE ✓	01
1.2.2	TRUE ✓	01
1.2.3	FALSE ✓	01
1.2.4	TRUE ✓	01
1.2.5	TRUE ✓	01

**Question 2**

**MARKS: 16**

**NUMBERS, OPERATIONS AND RELATIONSHIPS**

2.1		
2.1.1	$\begin{array}{r} 332 \\ -141\checkmark \\ \hline 191 \end{array}$	1 Mark for method and answer.
2.1.2	$\begin{array}{r} 472 \\ \times \quad 8\checkmark \\ \hline 3776 \end{array}$	1 Mark for method and answer.
2.2		
2.2.1	$\begin{aligned} &2 \times 12 \div 3 + 1 \\ &= 2 \times 12 + 1\checkmark \\ &= 8 + 1 \\ &= 9\checkmark \end{aligned}$	1 Mark for simplification.  Mark for answer

2.2.2	<p>Downloaded from <a href="http://Stanmorephysics.com">Stanmorephysics.com</a></p> $= 2 \times 12 \div 4$ $= 2 \times 3$ $= 6\sqrt{\quad}$	<p>1 Mark for simplification.</p> <p>1 marks for answer.</p>
2.3		
2.3.1	<	01
2.3.2	<	01
2.4.1	 <p> <math>1800 = 2 \times 2 \times 2 \times 3 \times 3 \times 5 \times 5</math>  <math>= 2^3 \times 3^2 \times 5^2\sqrt{\quad}</math> </p> <p> <math>375 = 3 \times 5 \times 5 \times 5\sqrt{\quad}</math>  <math>= 3^1 \times 5^3</math> </p> <p> <math>300 = 2 \times 2 \times 3 \times 5 \times 5</math>  <math>= 2^2 \times 3^1 \times 5^2\sqrt{\quad}</math> </p>	<p>1 Mark for all ladder method.</p> <p>3 marks for answer.</p>
2.4.2	$\text{HCF} = 3^1 \times 5^2\sqrt{\quad}$ $= 3 \times 25$ $= 75\sqrt{\quad}$	<p>1 marks simplification.</p> <p>1 mark answer.</p>
2.4.3	$\text{LCM} = 2^3 \times 3^2 \times 5^3\sqrt{\quad}$ $= 8 \times 9 \times 125$ $= 9000\sqrt{\quad}$	<p>1 mark simplification.</p> <p>1 mark answer</p>

3.1	<table border="1"> <thead> <tr> <th data-bbox="263 241 596 327">Common fraction</th> <th data-bbox="596 241 922 327">Decimal fraction</th> <th data-bbox="922 241 1240 327">Percentage</th> </tr> </thead> <tbody> <tr> <td data-bbox="263 327 596 421"><math>\frac{1}{4}</math></td> <td data-bbox="596 327 922 421">0.25✓</td> <td data-bbox="922 327 1240 421">25%</td> </tr> <tr> <td data-bbox="263 421 596 501"><math>\frac{1}{100}</math>✓</td> <td data-bbox="596 421 922 501">0.01</td> <td data-bbox="922 421 1240 501">1%✓</td> </tr> </tbody> </table>	Common fraction	Decimal fraction	Percentage	$\frac{1}{4}$	0.25✓	25%	$\frac{1}{100}$ ✓	0.01	1%✓	3 marks
Common fraction	Decimal fraction	Percentage									
$\frac{1}{4}$	0.25✓	25%									
$\frac{1}{100}$ ✓	0.01	1%✓									
3.2	$3\frac{1}{2} - 2\frac{3}{4} + 1\frac{1}{8}$ $= \frac{7}{2} - \frac{11}{4} + \frac{9}{8}$ $= \frac{28 - 22 + 9}{8}$ $= \frac{15}{8}$	1 mark for simplification.  1 mark for simplification.  1 mark for simplification.									
3.3	$20 \times \frac{4}{3}$ $= \frac{80}{3}$ $= 26.67$	1 mark for answer.									
3.4	$32 \times \frac{3}{4}$ $= \frac{96}{4}$ $= 24$	1 mark for answer.									
3.5	Rice: Water = 1 : 2 1 part = 12 cups of water ✓ 2 parts = 2 × 12 cups of water ✓ = 24 cups of water ✓	3 marks.									

4.1	$\frac{25}{100} \times 550$ $= R137,50\checkmark$ <p>New price = R550 – R137.50</p> $= R412,50\checkmark$	<p>1 mark for discount.</p> <p>1 mark for new price.</p>
4.2	$50\,000 \times \frac{5}{100}$ $= R2500 \text{ interest for 1 year}\checkmark$ <p>total interest = 2500 × 5</p> $= R12\,500\checkmark$ <p>total at the end of 5 years = R50 000 + R12 500</p> $= R62\,500\checkmark$	<p>1 mark intern for a year</p> <p>1 mark total interest.</p> <p>1 mark for total at the end of 5 years</p>
4.3		
4.3.1	<p>cash deposit = <math>6000 \times \frac{10}{100}\checkmark</math></p> $= R600\checkmark$	2 marks
4.3.2	<p>loan amount = R6000 – R600</p> $= R5400$	<p>1 marks</p> <p>Answer.</p>
4.3.3	$5400 \times \frac{8.5}{100}$ $= R459 \text{ interest for one year}$ <p>interest for 3 years = R459 × 3</p> $= R1377\checkmark$ <p>total owed at the end of 3 years = R5 400 + R1 377</p> $= R6\,777$ <p>number of months = 3 × 12</p> $= 36$ <p>monthly payment = R6777 ÷ 36</p> $= R188,25\checkmark$	<p>1 mark for 3 years interest.</p> <p>1 mark for total owed.</p> <p>1 mark for monthly payment.</p>

4.3.4

$$R6\ 777 + 600\sqrt{\phantom{x}}$$

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$$= R7\ 377\sqrt{\phantom{x}}$$

2 marks.

