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GAUTENG PROVINCE
EDUCATION
REPUBLIC OF SOUTH AFRICA

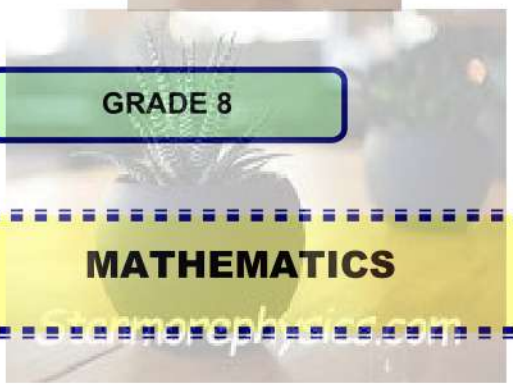
Task: Assignment

TERM 1

2024

SEDIBENG WEST

GRADE 8



MATHEMATICS

MARKS: 50

Duration: Two days

N.B!!!!!!!!This task is expected to be done in class by learners under supervision.

This task consists of 5 pages.

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MATHEMATICS

INSTRUCTIONS AND INFORMATION

1. This task 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 BASED ON NUMBER, OPERATION AND RELATIONSHIP.

   SECTION B: TWO QUESTIONS BASED ON COVERED TOPICS

   QUESTION 2: WHOLE NUMBERS.

   QUESTION 3: INTEGERS

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.

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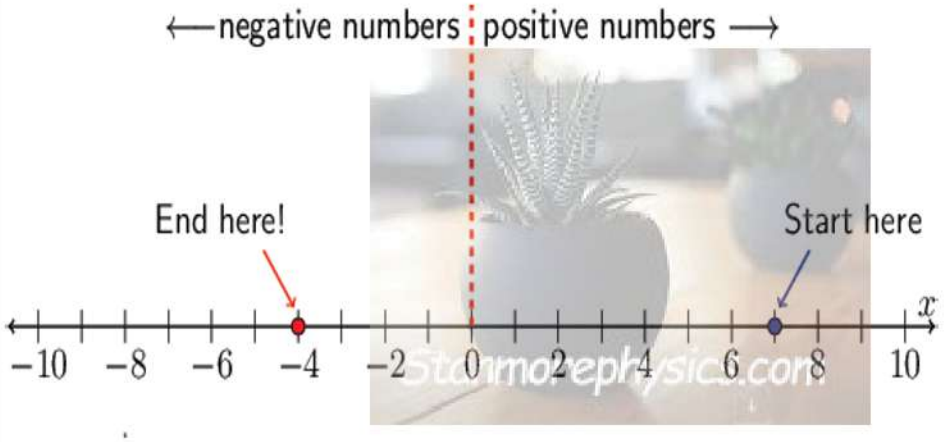
QUESTION 1

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

1.1	The prime factors of 30 are…… A. 1; 2; 3; 5; 12. B. 3; 5; 6. C. 2; 3; 5. D. None of the above.		(1)
1.2	R126,00 decreased in the ratio 3:7 is …. A. R37,80 B. R12,60 C. R294 D. R54		(1)
1.3	A bus driver covers a certain distance in 3 hours at an average speed of 80 km/h. How long will the journey take at an average speed of 50 km/h? A. 0,2 hours B. 0,6 hours C. 1,9 hours D. 4,8 hours		(1)
1.4	The figure below shows the number line with two points on it. If you start at the blue dot at $x = 7$, what must you do in order to reach the red dot at $x = -4$? 		(1)

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	You need to … A. Add 11 to 7 B. Add 4 to 7 C. Subtract -4 from 7 D. Subtract 11 from 7		
1.5	The expression below can be written in a different way. $5 + (-10)$ Which of the choices in the table is equal to the expression? A. $5(-10)$ B. $5 - 10$ C. $5 + 10$ D. None of the above.		(1)
			[5]

QUESTION 2

2.1. 120 can be written as the product of its prime factors as follows: $120 = 2^3 \times 3 \times 5$.				
	2.1.1	Now write 90 as product of its prime factors.		(2)
	2.1.2	Determine the HCF (highest common factor) of 120 and 90.		(2)
	2.1.3	Determine the LCM (lowest common multiple) of 120 and 90.		(2)
2.2. Simplify the ratio 7 200 cents: R 16,80.				(2)
2.3. A computer costs R14 400 cash. If one enters into a hire-purchase agreement, you can pay off the computer in three years' time at 15,2% interest per year. A deposit of 10% is required. Calculate the monthly instalment.				(4)
2.4. An item costs R124 including 15% VAT. What was the price before VAT was added?				(2)
2.5. A dripping tap loses $10ml$ of water every minute.				
	2.5.1.	How much water is wasted in 1 hour and 5 minutes?		(1)
	2.5.2.	How long will it take to lose 1,35 l of water? Give your answer in hours and minutes		(3)
2.6. An employee at a courier business finds that if each parcel weighs $300g$, he can easily carry 28 parcels at a time in a container. How many parcels can he carry if each parcel weighs $400g$?				(2)
2.7. Johan borrows R25 500 from a bank which charges simple interest at 8,5% p.a.				
	2.7.1	How much does he owe the bank after seven years?		(3)
	2.7.2	How much interest does he have to pay after seven years?		(2)
2.8. The exchange rate of the South Africa rand to the British pound is £1 = R21,23. A car costs R450 750 in South Africa. What will the price of this car be in England?				(3)

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				[28]
QUESTION 3				
3.1. Write down the answer for the following statements.				
	3.1.1	An integer which is a whole number, but not a natural number.		(1)
	3.1.2	An integer which is neither a whole number nor a natural number.		(1)
	3.1.3	The integer which is 4 less -6.		(1)
	3.1.4	The integer which is 8 more than -6.		(1)
	3.1.5	The integer which lies exactly in the middle of -7 and 3 on the number line.		(1)
	3.1.6	The smallest positive integer which is a multiple of 7 as well as an even number.		(1)
3.2. Calculate the values of the expressions below without using a calculator. (Show your calculation.) **NB!!! Answers only, no mark(s) will be awarded.**				
	3.2.1	$(-1)+(-7)+(-5)$		(1)
	3.2.2	$-3+4\times5-6$		(2)
	3.2.3	$-(-4)^2-\sqrt{6^2}-(-2)^3$		(3)
	3.2.4	$\sqrt{-4\times-9+8^2}$		(3)
	3.2.5	$\dfrac{10-6\div2}{-7-(2\times-7)}$		(4)
				[19]

Total	**50 Marks**

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GAUTENG PROVINCE
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Task: Assignment

Marking Guideline

TERM 1

2024

SEDIBENG WEST

GRADE 8

MATHEMATICS

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MARKS: 50

This marking guideline consists of 6 pages.

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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

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No	Expected Answer	Clarification	Marks
1.1	B. 2; 3; 5.		(1)
1.2	D. R54	Decrease R126,00 in ratio 3:7 $R126{,}00 \times \frac{smaller\ number}{greater\ number}$ $= 126 \times \frac{3}{7}$ $= R54$	(1)
1.3	D.4,8 hours	$d = s \times t$ $= 80 \times 3$ $= 240\ km$ $\therefore same\ distance$ $t = \frac{d}{s}$ $= \frac{240}{50}$ $= 4{,}8\ hours$	(1)
1.4	C		(1)
1.5	B		(1)
			[5]
QUESTION 2			
	2.1.1	$90 = 2 \times 3^2 \times 5$ ✓ ✓	(2)
	2.1.2	$120 = 2^3 \times 3 \times 5$ $90 = 2 \times 3^2 \times 5$ ✓ ✓ $\therefore H.C.F = 2 \times 3 \times 5 = 30$	(2)
	2.1.3	$120 = 2^3 \times 3 \times 5$ $90 = 2 \times 3^2 \times 5$ ✓ $\therefore L.C.M = 2^3 \times 3^2 \times 5 = 360$ ✓	(2)
2.2.		✓ ✓ 7 200 : 1 680 30 : 7 ✓OR 72 : 16,80	(2)

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	$30:7$ ✓	
2.3.	$Deposit = \frac{10}{100} \times R14\,400$ $= R1\,440$ ✓ $Loan = R14\,400 - R1440$ $= R12\,960$ $S.I. = \frac{Prn}{100}$ $= \frac{R12\,960 \times 15{,}2 \times 3}{100} = R5\,909{,}76$ ✓ $Final\ Amount = R12\,960 + R5\,909{,}76 = R18\,869{,}76$ $\therefore Monthly\ instalment = \frac{R18\,869{,}76}{36}$ ✓ $= R524{,}16$ ✓	(4)
2.4.	$Amount\ before\ VAT \times \frac{115}{100}$ $= Amount\ including\ VAT\ Amount\ before\ VAT$ ✓ $= Amount\ including\ VAT \div \frac{115}{100}$ $= Amount\ including\ VAT \times \frac{100}{115}$ $= \frac{100}{115} \times 124$ $= R107{,}83$ ✓	(2)
2.5.1.	$Water\ wasted = 10\ ml \times 65$ $= 650ml$	(1)
2.5.2.	$Time\ taken\ to\ lose\ water = \frac{1350}{10}$ ✓ $= 135\ minute$ ✓ $= 2\ hours\ and\ 15\ minutes$ ✓	(3)
2.6.	$\frac{28}{1} \times \frac{300}{400}$ ✓ $= 21 parcels$ ✓	(2)
2.7. Johan borrows R25 500 from a bank which charges simple interest at 8,5% p.a.		
2.7.1	$S.I. = \frac{Prt}{100}$ $= \frac{R25\,500 \times 8{,}5 \times 7}{100}$ ✓ $= R15\,172{,}50$ ✓ $\therefore A = I + P$ $= R25\,500 + R15\,172{,}50$	(3)

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	$= R40\,672{,}50$ ✓ OR $A = P(1 + in)$ $= R25\,500\left(1 + \frac{8{,}5 \times 7}{100}\right)$ ✓ ✓ $= R40\,672{,}50$ ✓	
2.7.2	$S.I. = \frac{Prt}{100}$ $= \frac{R25\,500 \times 8{,}5 \times 7}{100}$ ✓ $= R15\,172{,}50$ ✓	(2)
2.8. $Price\ in\ England = \frac{450\,750}{21{,}23}$ ✓ $= £21231{,}75$ ✓ ✓		(3)
		[28]

QUESTION 3

	3.1.1	0 ✓	(1)
	3.1.2	Any negative integer. ✓	(1)
	3.1.3	-10 ✓	(1)
	3.1.4	2 ✓	(1)
	3.1.5	-2 ✓	(1)
	3.1.6	14 ✓	(1)
3.2. Calculate the values of the expressions below without using a calculator. (Show your calculation.) **NB!!! Answers only, no mark(s) will be awarded.**			
	3.2.1	$(-1) + (-7) + (-5)$ $= -1 - 7 - 5$ $= -13$ ✓	(1)
	3.2.2	$-3 + 4 \times 5 - 6$ $= -3 + 20 - 6$ ✓ $= 20 - 9$ $= 11$ ✓	(2)
	3.2.3	$-(-4)^2 - \sqrt{6^2} - (-2)^3$ $= -16 - 6 + 8$ ✓ $= -22 + 8$ $= -14$ ✓	(3)
	3.2.4	$\sqrt{-4 \times -9 + 8^2}$ $= \sqrt{36 + 64}$ ✓	(3)

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		$= \sqrt{100}$ $= 10$ ✓ ✓	
	3. 2. 5	$\frac{10 - 6 \div 2}{-7 - (2 \times -7)}$ $= \frac{10 - 3}{-7 - (-14)}$ ✓ ✓ $= \frac{7}{-7 + 14}$ ✓ $= \frac{7}{7}$ $= 1$ ✓	(4)
			[19]

Total	**50 Marks**