education

Department of Education
FREE STATE PROVINCE

SURNAME:			**_____ 100**
NAME:			
SCHOOL:			**_____%**
GRADE 7 _____	**BOY (MARK WITH X)**	**GIRL (MARK WITH X)**	**LEVEL: ___**

Question	1	2	3	4	5	6	7	8
Total Marks	**9**	**13**	**7**	**12**	**23**	**11**	**13**	**12**
Marks obtained								

GRADE 7

MATHEMATICS

2024

MARKS: 100

TIME: 2 hours

This question paper consists of 12 pages.

INSTRUCTIONS:

1. Read ALL the questions carefully.
2. Answer ALL the questions in the spaces or frames provided.
3. ALL calculations must be shown on the question paper.
4. You are NOT allowed to use a calculator.

QUESTION 1

Write the correct answer in the column provided.

		Answers	
1.1	Which fraction is the smallest? $\frac{1}{100}$ or $\frac{1}{1000}$		(1)
1.2	What must be added to 212 445 to get 312 945?		(1)
1.3	Calculate: $320 - 6 \times 4 \div 3 - 12$		(2)
1.4	Determine the lowest common multiple of 120 and 150.		(1)
1.5	Write down the prime factors of 135.		(1)
1.6	Simplify: $\frac{1}{3}$ of $\frac{3}{5}$		(1)
1.7	Complete: $113 - 25 = \square + 26 \times 2$		(1)
1.8	The product of the first three prime numbers is …		(1)

[09]

QUESTION 2

Complete the following table. Write the fraction in its simplest form. (6)

2.1

Decimal fraction	Common fraction	Percentage
0,01	2.1.1 _____	2.1.2 _____
2.13 _____	$\frac{4}{5}$	2.1.4 _____
2.1.5 _____	2.1.6 _____	150%

2.2 Insert $<$; $>$ or $=$ to make the statement true: (1)

$\frac{6}{7} \square \frac{3}{4}$

2.3 Arrange the following in ascending order: (1)

$\frac{7}{10}$; $\frac{1}{3}$; $\frac{9}{10}$; $\frac{1}{5}$

_____

2.4 Calculate the following. Simplify your answer where possible. (2)

$7\frac{1}{3} - 6\frac{1}{2} + 2\frac{2}{6}$

2.5 In my marble collection of 120 marbles, $\frac{1}{3}$ are red, $\frac{1}{4}$ are silver, $\frac{1}{6}$ are blue and the rest are green. How many marbles are green? (3)

[13]

QUESTION 3

3.1 Is the following number sentence true or false? (1)

$(2)^4 = 8$ _____

3.2 Calculate: $(6^3 - \sqrt[2]{121} + \sqrt[3]{8}) \div 3^2 \times 1^3$ (6)

[7]

QUESTION 4

4.1 What is the place value of 6 in the decimal number 9,086? (1)

_____

4.2 Round off 36,978 correct up to two decimal places. (1)

_____

4.3 Order the following decimals in descending order: (1)

20,15 ; 21,05 ; 20,51 ; 25,01 ; 21,50 ; 25,10

_____ ; _____ ; _____ ;_____; _____;_____

4.4 The school tuck shop sells chocolate at 70c each. At Thabo's shop, a bulk pack containing 20 chocolates costs R15,98. By how much does the Thabo's shop price exceed the tuck-shop price for each chocolate? (3)

4.5 The petrol tank of Mr. Peter's car holds 63,5 litres when full. He paid R380,88 to fill up with petrol. Petrol costs 1 035 cents per litre. How much petrol was in his tank before he filled up? (3)

4.6 A group of friends went out for dinner at a restaurant. The bill came to R1 182,50, including 7,5% tax. If they decided to leave a 20% tip on the bill after tax, how much did each person contribute if there were 5 friends in total? (3)

[12]

QUESTION 5

5.1 Ben had 1 222 boxes of noodles in his shop. Each box contains 18 packets of noodles. In the first month, he sold 238 boxes. In the second month, he sold 136 more packets than the first month. How many packets does he have left? (4)

5.2 At a football match, there were 11 820 spectators. 8 256 of the spectators were adults. Of the remaining spectators, there were 3 times as many teenagers as young children. How many teenagers were there? (4)

5.3 Mr. Cater wants to buy a laptop that costs R15 000. He must pay a deposit of 11% and the balance of the outstanding amount in 6 months to avoid paying interest.

5.3.1 Calculate the amount he must pay as a deposit on the laptop. (2)

5.3.2 How much must Mr. Cater pay per month to settle the outstanding amount? (3)

5.4 James had R145. After paying for 3 cards and some stamps he had R15 left. If each card cost R25 and each stamp cost R5, find the number of stamps he bought. (4)

5.5 Zack has R75 000 in a savings account that earns him 5% interest per year. How much money will he have in total in two years? (2)

5.6 There are 21 000 marbles in a bag. 10% of them are blue and 60% of them are red. The rest are yellow. $\frac{2}{3}$ of the yellow marbles were stolen. How many yellow marbles were left? (4)

[23]

QUESTION 6

6.1 What is 5 less than -5? _____ (1)

6.2 Calculate: $9 + (-3) - (-8) - (+7)$ (2)

6.3 Write the following in ascending order: (1)

$-8\ ;\ -1\ ;\ +14\ ;\ +3\ ;\ -25$

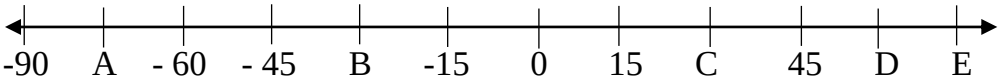
_____ ; _____ ; _____ ; _____ ; _____

6.4 Insert $<\ ;\ >$ or $=$ to make these sentences true:

6.4.1 $-8 \square 2$ (1)

6.4.2 $-20 \square -50$ (1)

6.5 Refer to the number line below to answer the following questions.



Calculate:

6.5.1 A + E (2)

6.5.2 A – B (3)

[11]

QUESTION 7

7.1 Consider the following diagrams:

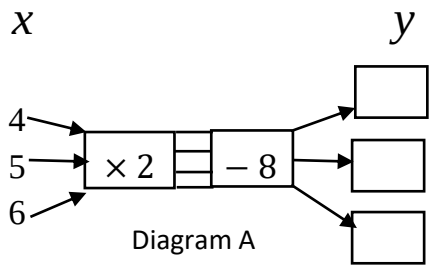


Diagram A

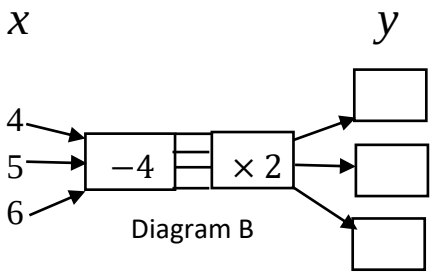


Diagram B

7.1.1 Complete each of the above diagrams in the spaces provided. (6)

7.1.2 Are these rules equivalent? Give a reason for your answer. (3)

_____

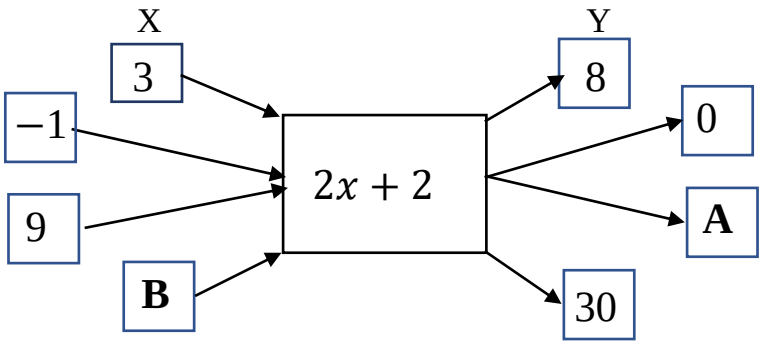
_____

7.1.3 If the input value is equal to *x* and the output value is equal to 4, write a number sentence for diagram A and B

Diagram A:_____

Diagram B:_____ (2)

7.2 Consider the flow diagram below and fill the values of A and B:



A:_____ B:_____ (2)

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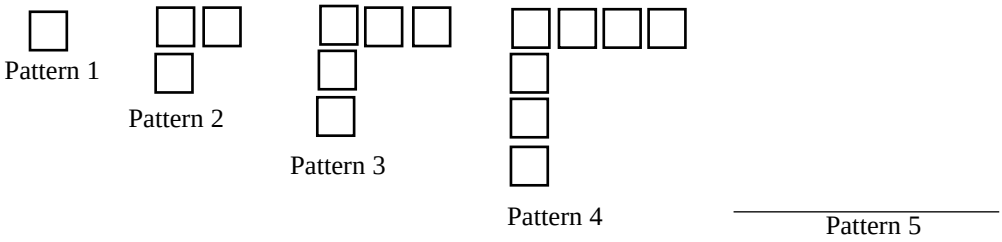
QUESTION 8

8.1 Use the pattern below and answer questions that follow:



8.1.1 Draw pattern 5 in the space provided. (1)

8.1.2 Complete the table below:

Pattern	1	2	3	10	**C**	50
Number of squares	1	3	5	**D**	29	99

C: _____ D:_____ (2)

8.2 Study the table below and answer the questions that follow.

x	1	2	3		**E**		10
y	5	11	17		41		**F**

8.2.1 Determine the rule of the pattern. (1)

_____

8.2.2 Use the rule to calculate the values of E and F.

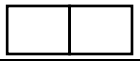
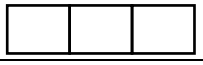
E:

(3)

F:

(3)

8.3 Consider the table to answer the following question.

Square	**1**	**2**	**3**
Diagram			
No. of matches	**4**	**7**	**10**

How many squares can you build with 34 matches? (2)

[12]

TOTAL: [100]