Western Cape Government
Education

Overberg Education District

GRADE 8

EXEMPLAR PAPER 1

MATHEMATICS

November 2014

MARKS: 75
TIME: 1,5 hours

This paper consists of 6 pages and 1 addendum

INSTRUCTIONS AND INFORMATION

1. This paper consists of **TWO** questions. Answer **BOTH** questions.

2. Answer QUESTION 2.7.2 on ANNEXURE A. Write your name in the space the ANNEXURE and submit with your ANSWER BOOK.

3. Number the answers correctly according to the numbering sytem used in this question paper.

4. Start EACH question on a NEW page.

5. You may use an approved calculator (non-programmable and non-graphical), unless stated otherwise.

6. Show ALL the calculations clearly.

7. Round off ALL the final answers off to TWO decimal places, unless stated otherwise.

8. Indicate units of measurement, where applicable.

9. Write neatly and legibly.

QUESTION 1

1.1

5	81	189	215	363	450	425	988

From the list of numbers above, write down ALL numbers that…

(a) is a factor of 162.
(b) are multiples of 11.
(c) divisible by 9.
(d) are prime numbers.

(4)

1.2 Write the missing number to make the sides equal.

467 940 + (1 670 + 357 865) + 2 678 879 = (467 940 + 1 670) + _____ + 357 865

(1)

1.3 Study the four numbers below.

30	**2**	**8**	**10**

Organise these numbers so that each equation is correct.

___ + ___ ÷ ___ — ___ = 24

Use each number only once per equation. Write down the whole equation.

(4)

1.4 Calculate the following without the use of a calculator:

$$-20(150 \times \frac{90}{-45} + 10)$$

(3)

1.5 Write from biggest to smallest.

$\frac{1}{100}$; $\frac{6}{10}$; $\frac{44}{100}$; $\frac{4}{5}$; $\frac{3}{20}$; $\frac{9}{25}$

(3)

1.6 Which is the smallest? Tip: Write numbers in normal notation first

$$1,123\times10^{5} \quad \text{of} \quad 9,2\times10^{3} \ ?$$ (3)

1.7 Determine $\sqrt{2916}$ by using prime factors (ladder method or factor tree or any other method). NO calculator! (3)

1.8 Write the following ratio in its simplest form by doing the necessary calculations:

0,5kg:250g (2)

1.9 Increase R750 in the ratio 3:4 (3)

1.10 A furnisher buys a chair at a cost price of R250 at a wholesaler and sells it at R325.

1.10.1 Calculate his profit in rand. (1)

1.10.2 Calculate the profit as a percentage of the cost price. (3)

1.11 Sandy's parents bought her a cellphone at a cost of R2 800. They decided to choose a hire purchase contract. According to the contract interest of 20% per annum will be added and it will be paid off in monthly installments for 2 years. No deposit is required. Determine the monthly installment payable. (4)

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QUESTION 2

2.1 Consider the following expression and answer the questions that follow.

$$-2x - x^3 + 9x^2 + 14(x^2 + 2)$$

2.1.1 How many terms does the expression have? (1)

2.1.2 Determine the value of the expression if $x = -2$ (3)

2.2 Simplify:

2.2.1 $\frac{p^4 . q^4 . q^2 . p^3}{q^6 . p^6}$ (3)

2.2.2 $(-8x^4y^2)(5x^3y^4)(-2x)$ (3)

2.2.3 $-5(2x^2 + x - 20) + 12x^2 + 3x$ (3)

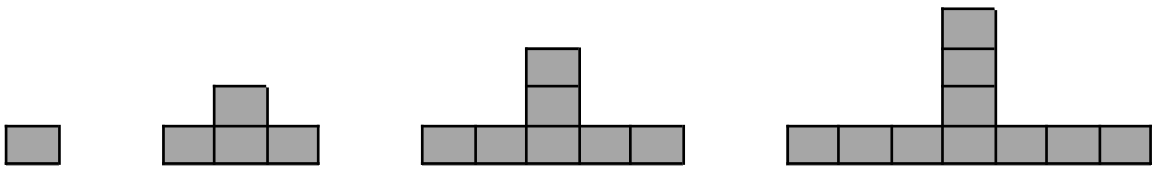
2.3 Solve for x

2.3.1 $4x + 5 = 5x - 9$ (2)

2.3.2 $5(x - 1) - (1 - 2x) = 8$ (4)

2.4 A father is 25 years older than his son. After five years he will be two times as old as his son. How old is the son now? (4)

2.5 Study the pattern below and answer the answer the questions that follow:

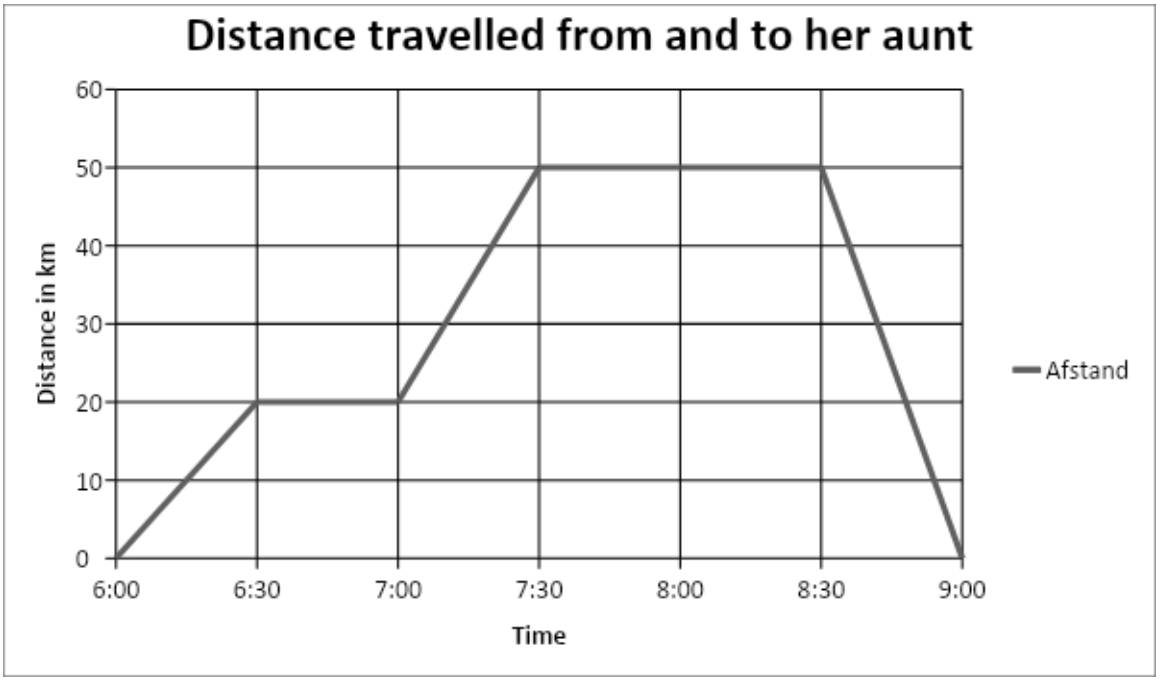


2.5.1 How many squares is in pattern 5? (2)

2.5.2 Write down a formula in the form N = ……,where N is the number of squares and p the pattern number. (3)

2.5.3 Use the formula in 2.5.2 to determine the number of squares in the 100th pattern. (2)

2.6 Nazley visited her aunt who stays 50km from their house. The graph below shows how she travelled.



2.6.1 What time did Nazley leave her home? (1)

2.6.2 What time did she arrive at her aunt's house? (1)

2.6.3 For how long did she stay at her Aunt's house? (2)

2.6.4 What time did she get back home eventually? (1)

2.7 Given $y = 2x - 3$.

x	—1	0	1	2	3
y					

2.7.1 Copy and complete the table (3)

2.7.2 On ADDENDUM A plot the points on the Cartesian plane. Draw the graph. (3)

[41]

TOTAL 75

ADDENDUM A:

NAME OF LEARNER: _____

GRADE 8 ( )

