

# ASSIGNMENT

**TERM 1**

**GRADE 9**

MATHEMATICS

# 2014

# SCHOOL BASED ASSESSMENT TASK

# MARKS: 50

# WEIGHTED MARK: 10

# SUGGESTED TIME: 1 hour

# TERM 1: Investigation

**INVESTIGATION**

**MARKS: 50 EXAMINER :**

**TIME: 1 hour MODERATOR:**

**This question paper consists of 4 pages**

**Question 1**

***Are the following statements true or false? Write your answer in the space provided to you in the table.***

|  |  |  |
| --- | --- | --- |
| 1. | Natural numbers also include decimal numbers. |  |
| 2. | 5 is equal to zero |  |
| 3. | 1 + 2 × 6 + 11 × 2 = 58 |  |
| 4. | A number divided by zero is undefined |  |
| 5. | 5,95 as a percentage is 59, 5% |  |
| 6. | ( is an example of the distributive law. |  |
| 7. | The square root of 64 added to two cubed is 18 |  |
| 8 |  |  |

[8]

**Question 2**

2.1 The sum of two numbers is 807 090.

If one number is 485 316, what is the other?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (2)

2.2 Express 18 and 24 as products of their prime factors.

24 18

24 = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (1)

18 = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (1)

2.3 Arrange the following numbers in descending order:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (2)

2.4 Determine the HCF and LCM of 21 and 27.

HCF of 21 and 27 =\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (1)

LCM of 21 and 27 =\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (1)

2.5 What is written in standard notation? (1)

**[9]**

**Question 3**

Simplify: Show all your workings

* 1.  (2)
  2. (2)

3.4  (3)

3.5  (3)  **[10]**

**Question 4**

4.1 Simplify the following without using a calculator:

(a) (2) (b) (3)

4.2 Tarra bought a fridge for R2 500 and sold it for R3 999. Calculate the percentage profit

she made. (2)

4.3 Ivy bought the fridge for R3 999 and paid a deposit of 10%. How much was her deposit? (2)

4. 4 R5 000 is invested at 6 % simple interest per year for 4 years. Calculate what the investment is

worth at the end of the 4 years. (3)

|  |  |  |
| --- | --- | --- |
| 4.5 | Grandparents of Zakhele gives her R15 000 for her 21st birthday. Calculate the compound interest earned over 2years at 12% p.a. interest. | (4) |

**[14]**

**Question5**

|  |  |  |
| --- | --- | --- |
| 5.1 | Give the value of for each of these equivalent ratios |  |
| 5.1.1 | 3 : 8 → : 24 | (2) |
| 5.1.2 | : 77 → 7 : 11 | (2) |
| 5.2 | Say whether each of these relationships is direct or indirect  proportion: |  |
| 5.2.1 | The more alcohol you drink, the lower your driving ability. | (1) |
| 5.2.2 | I can buy 5 sweets for R2, and 10 sweets for R4. | (1) |
| 5.3 | If a calculator is sold for R120.00. Whatwill the new price of a calculator be if the original selling price is **Increased in a ratio of 5 : 3** | (3) |

**[9]**



**MEMO FOR ASSIGNMENT**

**Question 1**

***Are the following statements true or false? Write your answer in the space provided to you in the table.***

|  |  |  |
| --- | --- | --- |
| 1. | Natural numbers also include decimal numbers. | FALSE |
| 2. | 5 is equal to zero | FALSE |
| 3. | 1 + 2 × 6 + 11 × 2 = 58 | FALSE |
| 4. | A number divided by zero is undefined | TRUE |
| 5. | 5,95 as a percentage is 59, 5% | FALSE |
| 6. | ( is an example of the distributive law. | TRUE |
| 7. | The square root of 64 added to two cubed is 18 | FALSE |
| 8 |  | FALSE |

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**Question 2**

2.1 The sum of two numbers is 807 090.

If one number is 485 316, what is the other?

(2)

2.2 Express 18 and 24 as products of their prime factors.

|  |  |  |  |
| --- | --- | --- | --- |
|  | 2 |  | 18 |
|  | 3 |  | 9 |
|  | 3 |  | 3 |
|  | 3 |  | 1 |
|  |  |  |  |

|  |  |
| --- | --- |
| 2 | 24 |
| 2 | 12 |
| 3 | 6 |
| 2 | 2 |
|  | 1 |
|  |  |

24 = (1)

18 = (1)

2.3 Arrange the following numbers in descending order:

(for every TWO values in correct order = 1 mark) (2)

2.4 Determine the HCF and LCM of 21 and 27.

HCF of 21 and 27 = 3 (1)

LCM of 21 and 27 = 3 (1)

2.5 (1)

Question 3

|  |  |  |  |
| --- | --- | --- | --- |
| 3.1 | 27✓✓ | 2 marks for answer | (2) |
| 3.2 | ✓  = 5✓ | 1 mark adding  1 mark for answer | (2) |
| 3.3 | = 81✓ + 1 – 7✓  = 75✓ | 2 marks for step 2  1 mark for answer | (3) |
| 3.4 | = -1 + 100 – 20✓ ✓  = 79 ✓ | 2 marks for method  1 mark for answer | (3) |

**Question 4**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 4.1 a | ✓  ✓ | | 1 mark for method  1 mark for answer | | (2) |
| 4.1 b | = + X  = +  =  = | | 1 mark for reciprocal  1 for method  1mark for answer | | (3) |
| 4.2 | X 100%  = 59,96% or 60% | | 1 mark for method  1 mark for answer | | (2) |
| 4.3 | R3 999 X 10%  = R399,90 | | 1 mark for method  1 mark for answer | | (2) |
| 4.4 | A = R6 200  Any other method accepted | | 1 mark for formula  1 mark for substitution  1 mark for answer | | (3) |
| 4.5 | | = 15 000(1 + 0,12)2  = R 9 600(1.12)2  = R18 816  18 816 – 15 000 = R3 816 | | (4) | |

Question 5

|  |  |  |
| --- | --- | --- |
| 5.1.1 | 3 : 8 → : 24 | (2) |
| 5.1.2 | : 77 → 7 : 11 | (2) |
|  | |  |
| 5.2.1 | indirect proportion | (1) |
| 5.2.2 | direct proportion | (1) |
| 5.3 | Let the new price be | (3) |