

# CYCLE TEST

**TERM 1**

**D9 JE**

**GRADE 9**

MATHEMATICS

MEMORANDUM

# 2014

# SCHOOL BASED ASSESSMENT TASK

# MARKS: 50

# WEIGHTED MARK: 10

# SUGGESTED TIME: 1 hour

# TERM 1: Investigation

**INVESTIGATION**

**MARKS: 60 EXAMINER :**

**TIME: 1 hour MODERATOR:**

**This question paper consists of 7 pages**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| QUESTION 1  FOR EACH QUESTION, CIRCLE THE LETTER OF THE CORRECT ANSWER. | | | | |
| 1.1 | Which of the following expressions shows how 36 can be expressed as a product of its prime factors?  A.  B.  C.  D. | |  | (1) |
| 1.2 | Which of the numbers written below is a rational number?  A.  B.  C.  D. | |  | (1) |
| 1.3 | Which of the following expressions is equal to  ?  A.  B.  C.  D. | |  | (1) |
| 1.4 | Siya created this number pattern: 2 ; 8 ; 26 ; 80 ; 242. Which of the following rules describes his number pattern?  A. Add 6 to the previous term  B. Multiply the previous term by 3 and add 2  C. Multiply the previous term by 4  D. Multiply the previous term by 3 and add 4 | |  | (1) |
| 1.5 | 1.5 If and , the value of −2 is    A. 10  B. −48  C. −96  D. 40 | |  | (1) |
| 1.6 | Consider the following flow diagram:    The value of 𝑎 is  A.  B.  C.  D. | |  | (1) |
| 1.7 | Which of the statements below is the BEST estimate of  A.  B.  C.  D. | |  | (1) |
| 1.8 | There were boys and 𝑛 girls in a parade. Each person carried 2 balloons. Which of the expressions below represents the total number of balloons that were carried in the parade.    A.  B.  C.  D. | |  | (1) |
| 1.9 | Consider the ordered pairs of numbers (0 ;−1) and (1 ; 3). Which of the equations below is satisfied by BOTH of these co-ordinate pairs?    A.  B.  C.  D. | |  | (1) |
| 1.10 | 1.10 Alongside is a diagram of a rectangular  garden. The garden has a length of () metres and a width of 𝑥 metres.  The white area is a rectangular path that  is 1 metre wide. Which of the expressions  below represents the area of the shaded  portion of the garden.    A.  B.  C.  D. | |  | (1) |
|  | | | | [10] |
| QUESTION 2 | | | | |
| 2.1 | 12 | |  | (1) |
| 2.2 |  | |  | (1) |
| 2.3 | litres  litres | |  | (3) |
| 2.4 | kg | |  | (3) |
| 2.5 | Mr Ndlovu:        Mrs Moyo        Mr Ndlovu | |  | (6) |
|  | | | | [14] |
| QUESTION 3 | | | | |
|  | 3.1.1 |  |  | (3) |
|  | 3.1.2 |  |  | (3) |
| 3.2 |  | |  | (3) |
| 3.3 | The shapes shown are made of ice cream sticks.    The table represents the number of sticks (𝑦) needed to create each shape (𝑥). | |  |  |
|  | 3.3.1 | |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | Shape() | 1 | 2 | 3 | 4 | 5 | 6 | 7 | | Number of sticks () | 4 | 12 | 20 | 28 | 36 | 44 | 52 | |  | (2) |
|  | 3.3.2 | OR |  | (3) |
|  | 3.3.3 |  |  | (3) |
|  | | | | [17] |
| QUESTION 4 | | | | |
| 4.1 | Simplify | |  |  |
|  | 4.1.1 | 0,125 |  | (2) |
|  | 4.1.2 |  |  | (3) |
|  | 4.1.3 |  |  | (2) |
| 4.2 | Simplify | |  |  |
|  | 4.2.1 |  |  | (3) |
|  | 4.2.2 |  |  | (3) |
|  | 4.2.3 |  |  | (3) |
|  | 4.2.4 |  |  | (3) |
|  | | | | [19] |

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| --- | --- |
| **Total** | **60 Marks** |