

## GAUTENG DEPARTMENT OF EDUCATION

|  |  |  |
| --- | --- | --- |
| **LEARNER’S NAME & SURNAME** | **:** |  |
| **SUBJECT** | **:** | **MATHEMATICS** |
| **GRADE** | **:** | **9** |
| **TASK** | **:** | **TERM 3 TEST MEMORANDUM** |
| **MARKS** | **:** | **50** |
| **DURATION** | **:** | **1 HOUR** |

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**INSTRUCTIONS AND INFORMATION**

Read the following instructions carefully before answering the questions.

1. Answer ALL the questions.
2. Number the answers correctly according to the numbering system used in this question paper
3. Clearly show ALL calculations which you have used in determining your answers where required.
4. Round off all final answers to two decimal places where it is required unless stated otherwise.
5. You may use an approved scientific calculator (non-programmable and non-graphical), unless stated otherwise.
6. Answers only will not necessarily be awarded full marks.
7. Note that diagrams are not necessarily drawn to scale.

8. Write neatly and legibly.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **QUESTION** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | **TOTAL** |
| **CONTENT** | Multiple content | Functions and relationships | Functions and relationships | Functions and relationships | Functions and relationships | Geometry of straight lines | Geometry of 2D shapes | Transformation geometry |  |
| **MARK ALLOCATED** | *10* | *3* | *6* | *4* | *5* | *6* | *4* | *12* | **50** |
| **LEARNERS’ MARK** |  |  |  |  |  |  |  |  |  |

Question 1

1.1.D. √

1.2. B√

1.3. C√

1.4. D√

1.5. B√

1.6. B √

1.7. A√

1.8. D√

1.9.C√

1.10.A√ [10]

QUESTION 2.

a). 0√

b). 6√

c). 8 √ [3]

Question 3

√ √ √ √ √ √

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| X | -2 | -1 | 0 | 1 | 2 |
| y | -3 | -2 | -1 | 0 | 1 |

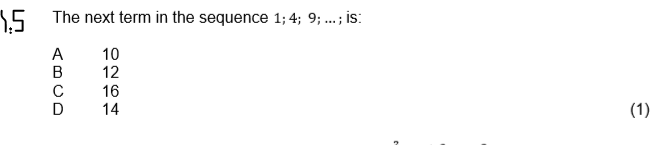
[6]

Question 4

4.1. The input is multiplied by -4 and then add 1 to get the output value. √√

4.2. Y = -4x + 1 √√ [4]

Question 5

 5.1. Y = x – 1 √ √ [2]

5.2.

- = x – 1√

x = (1 - ) X√

X = 1 √

[3]

Question 6

Statement

+ X + = 180ᵒ

+ 74ᵒ + 90ᵒ= 180ᵒ

= 16ᵒ√

= 90ᵒ√

= 16ᵒ√

Reason

Sum of ﮮ of ∆√

Alt ﮮ equal; YX║ZW√

Alt ﮮ equal; WX║ZY√

[6]

Question 7 (One mark for statement and reason)

|  |  |
| --- | --- |
| Statement | Reason |
| √  √ | (Ext  ( |

[4]

Question 8.

Y

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |  | 6 |  | |  | |  | |  | |  | |  | |  | |  | |
|  |  |  |  | **A** |  |  |  | 5 |  | |  | |  | |  | |  | |  | |  | |  | |
|  |  |  |  |  |  |  |  | 4 |  | |  | |  | |  | |  | |  | |  | |  | |
|  | **B** |  | 1 |  |  |  | **A¹** | 3 |  | |  | |  | |  | |  | |  | |  | |  | |
|  |  |  |  | **C** |  |  |  | 2 |  | |  | |  | |  | |  | |  | |  | |  | |
|  |  |  |  |  |  |  |  | 1 |  | |  | |  | |  | |  | |  | |  | |  | |
|  |  |  |  | **B¹** |  |  |  |  |  | | **C¹** | |  | |  | |  | |  | |  | |  | |
|  | -6 | -5 | -4 | -3 | -2 | -1 | **2** |  | | 1 | | 2 | | 3 | | 4 | | 5 | | 6 | | 7 | | 8 | |
|  |  |  |  |  |  |  |  | -1 | |  | |  | |  | |  | |  | |  | |  | |  | |
|  |  |  |  |  |  |  |  | -2 | |  | |  | |  | |  | |  | |  | |  | |  | |
|  |  |  |  |  |  |  |  | -3 | |  | |  | |  | |  | |  | |  | |  | |  | |
|  |  |  |  |  |  |  |  | -4 | |  | |  | |  | |  | |  | |  | |  | |  | |
|  |  |  |  |  |  |  |  | -5 | |  | |  | |  | |  | |  | |  | |  | |  | |
|  |  |  |  |  |  |  |  | -6 | |  | |  | |  | |  | |  | |  | |  | |  | |
|  |  |  |  |  |  |  |  | =7 | |  | |  | |  | |  | |  | |  | |  | |  | |

*One mark for each correct point*

*8.1 is Triangle marked 1*

*8.3. is Triangle marked 2.*

X

[6]

8.2 Coordinates of A¹ : (-4 + 3 ; 5 -2) √

= (- 1 ; 3 ) √

Coordinates of B¹ : (- 6 + 3 ; 3 – 2) √

= ( - 3 ; 1 ) √

Coordinates of C¹ : (- 2 + 3 ; 3 – 2) √

= (1;1) √ [6]