**GAUTENG DEPARTMENT OF EDUCATION**

|  |
| --- |
| MATHEMATICS **GRADE 9**  **CONTROLLED TEST TERM 3**  **MEMORANDUM** |

**Marks:** 50

**Date:** \_\_\_\_\_\_\_ 2021

**Duration:**  60 min

**Examiner:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_ **Moderator: \_\_\_\_\_\_\_\_\_\_\_\_\_\_**

3 pages including this page.

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 |

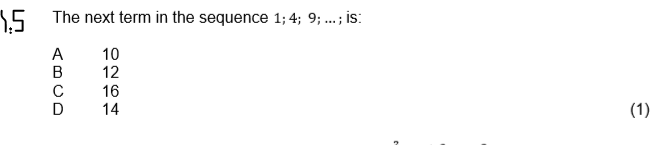
[6]

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)

Reason

Given√

Given√

Given√

SAS√

Statement

In ∆ABC and ∆DEF:

AC = DE

ﮮA = ﮮD

BC = DF

:. ∆ABC ∆DEF

[4]

Question 8.

Y

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

*One mark for each correct point*

*8.1 is Triangle marked 1*

*8.2. is Triangle marked 2.*

X

[6]

8.3 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]