

12 fY%aKsh

GRADE 12

E

meh

Hour

I

**udisl jdr mÍCIKh - 2023**

**Monthly Test - 2023**

ixhqla; .Ks;h

**COMBINED MATHEMATICS**

10

* **Answer four questions only.**

01. a). Express as rational number.

i). **0 . 1**

ii). **0 . 1 0 .**

b). Rationalize the denominator.

i). ii).

c). Simplify,

i).  **- +**

ii).  **+ +**

d). If  then show that,

02. a). Solve the equation,

b). Solve the equation,

**– – 6**

c). Solve the simultaneous equations.

**and**

03. a). The function f(x) is defined as,

**+ 2 ,**

Find,

i). the domain and range of the function.

ii).

iii).

b). The functions and defined as,

and  Find,

i). ii). iii). iv).

c). The functions and are defined by

, Where and is a constant.

i). Find the value of for which

ii). Prove that

**14 cm**

**O**

**14 cm**

**240**

**A**

**B**

04. a). is the center of the circle of radius . Find,

i). The length of major arc

ii). The area of shaded region.

iii). The perimeter of the major sector.

**A**

**D**

**C**

**B**

**E**

**14 cm**

b). is a square of the side .

Find,

i). Area of triangle.

ii). Area of sector.

iii). Area of the shaded region

iv). Perimeter of the shaded region.

05. a). Find the values of the following.

i).

ii).  **- +**

iii).  **+**

iv).

b). If  and in the second quadrant, then find the values of the following.

i).

ii).

iii). Simplify,

iv). Simplify,

c). Prove that,

i).

ii).

iii).