**MATHEMATICS**

**FORM I**

**TERM II-2021**

**MID- TERM EXAM**

**NAME…………………………………………………. CLASS…………………. ADM ….…**

**Time -**$1\frac{1}{4}$ **hours**

**Answer all questions in the spaces provided**

1. Simplify the following by use of common factors.2mks

$$\frac{b²-4b}{b-4}$$

1. Factorize the following expression.2mks

2ab +abk – 2m – mk

1. The ratio of boys to girls in a class is 3:5. If there are 16 girls in the class how many boys are there? ( 3mks)
2. The cost of a text book was raised by 20% and a month later the new price was lowered by 10%.what was the final price of the text book if the original price of the text book was 600.4mks
3. A man wants to fence his plot which measures 745m by 230m. Howmany fencing posts will he require if posts are spaced 5m apart?3mks?
4. Calculate the area of the shaded region in the figure below. 4mks



1. A car can travel 60km on 4litres of petrol. How far can it travel on 15 litres of petrol . (3mks)
2. A can contains 5litres of petrol .if the weight is 4kg, calculate the density of petrol. (3mks)
3. (a) A car left Kitale at 2240hrs and arrived at 0030hrs the next day tow did the journey take. (3mks )

(b) If the distance between kitale and Nairobi is 250km find the average speed of the car. (3mks)

1. Solve the following equation . (3mks)

$\frac{ x+2}{3}-\frac{x-4}{4}$ = $\frac{5}{12}$

1. Solve the following simultaneous equation. (3mks)

2k +m = 7

3k – 2m = 10

1. The diagram below represents a flowerbed. Calculate the perimeter of the flower bed. (3mks)

 21m

1. A school water tank has a radius of 3.5 m and a height of 2m.
2. Calculate the capacity of the tank in litres when the tank is full. (4mks)
3. If the school uses 5000 litres of water in a day, how many days will the full tank last? (3mks)
4. The cost of water is Sh 200 per a 1000litres of water. How much money does the school pay for one full tank. (3mks)

1. The table below shows a travel - time table for a vehicle operating between town A and D. the distance between town A and D is 150 km

|  |  |  |
| --- | --- | --- |
| town | Arrival  | Departure  |
| A |  | 10:00 am |
| B | 10:20am | 10:30 am |
| C | 11:30 am | 11:15 am |
| D | 2:30 Pm |  |

1. At what time does the vehicle depart from town A. (1mk)
2. How long does the vehicle take to travel from town A to town B.? (2mks)
3. How long did it stay in town B. (2mks)
4. What time does the vehicle arrive in town D. (1mk)
5. Calculate the average speed for the whole journey. ( 3mks)