

FOCUS A365

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G A T I T U S E C O N D A R Y S C H O O L

Form 1 | Term 2 | 121 A - Mathematics | 31-Ago-16 | End Term

ADM..... NAME CLASS TIME: $2\frac{1}{2}$ hrs

INSTRUCTIONS:

1. Write your name, class and ADM number in the spaces provided above.
2. All workings must be clearly shown
3. Any acts of **cheating** will render your examinations nullified
4. Sign and write the date of the examination in the spaces provided below
5. This exam has **TEN** printed pages. With section A and B. Answer all questions in **Section A** and any also **ALL** questions in **Section B**

For examiner's use only

Question/Section/Page	1	2	3	4	5	6	7	8	9	10	Total
Max. Score	2	13	12	15	8	14	10	12	9	5	100
Candidate's Score											
Teacher's Remarks :											

Questions

SECTION A: (50MKS) (answer all questions in this section)

1. (a) Evaluate $540396 - 726450 \div 3$ (1 mk)

(b) Write the total value of the digit in the thousands place of the results obtained in (a) above (1 mk)

2. Work out:

a. $7 \times -5 =$ **(1 mk)**

b. $-4 \times -6 =$ **(1 mk)**

c. $-(+4 \times +7) - (-12 \div 4) =$ **(2 mks)**

d. $-4\frac{1}{5} \times 1\frac{1}{14} =$ **(2 mks)**

3. Round off the each of the following numbers to the nearest number indicated in the bracket

a. 473678 (100) **(1 mk)**

b. 524232 (1000) **(1 mk)**

c. 38679 (10000) **(1 mk)**

4. Express as a fraction:

a. $0.\dot{2}\dot{7}$ **(2 mks)**

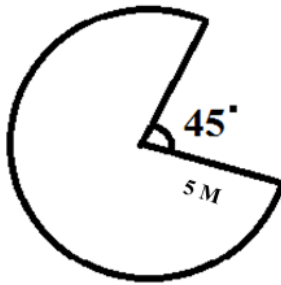
b. $3.2\dot{5}\dot{6}$ **(2 mks)**

5. Find the ratio of a:c if: $a : x = 3 : 1$, $x : y = 4 : 1$, $y : c = 2 : 1$ **(2 mks)**

6. Find the perimeter of the following figures (use $\pi = 3.142$)

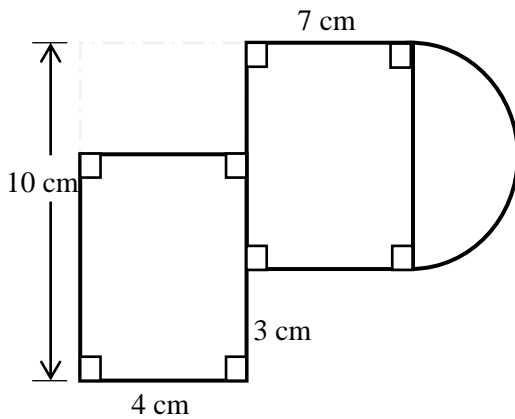
a.

(3 mks)



b.

(3 mks)



7. The length of an arc of a circle is 62.8 cm . if the arc subtends an angle of 144° at the centre. Find the radius of the circle. (take π to be $\frac{22}{7}$) **(4 mks)**

8. Use mathematical tables to evaluate the following questions to **(3 S.F)**

a. 42.5^2 **(3 mks)**

b. $\sqrt{0.8236}$ **(3 mks)**

9. Gerald is twice as old as his brother Robert, and their sister Mary is 7 years younger than Robert.
Write down an expression for the sum of their ages **(3 mks)**

10. Simplify the following expressions:

a. $\frac{a-b}{2} - \frac{2a+b}{3}$ **(3 mks)**

b. (without using mathematical tables or a calculator) solve:

$$\frac{0.036 \times 2}{0.05 \times 3}$$

(3 mks)

11. Two business partners received $\frac{5}{7}$ and $\frac{2}{7}$ of the business proceeds after a year. The businessman who received the larger share was required to spend $\frac{1}{8}$ of his share to pay all workers. If the business realized Sh.180, 000.00. How much did the workers receive? **(3 mks)**

12. Andusta made three trips from town P to town Q by bus. On two occasions, he returned to P by minibus and once by bus. If the fare to Q from P is Sh. 180 by bus and Sh. 220 by minibus, how much did the trips cost him? **(3 mks)**

13. If $A=(R^2 - r^2)$. Find A when:

a. $R = 19$ and $r = 11$

(1 mk)

b. $R = 0.6$ and $r = 0.2$

(1 mk)

SECTION B: (50MKS) *(this section has 5 questions, answer any **five** question from this section)*

14. Maurine is ten years older than her brother Jonathan .Find an expression for :

a. Sum of their ages (2mks)

b. The sum of their ages in **five** years' time (2mks)

c. The product of their ages **three** years ago (3mks)

d. If 9 years ago Jonathan was 13years old .What is the present age of Maurine? (3mks)

15.

a. State a condition in which a number is divisible by the following numbers

4 –

5 –

8 –

10 -

(4mks)

b. Show whether the following numbers are divisible by numbers in the bracket :
i. 1257 (3) (2mks)

ii. 612 (11) (2mks)

iii. 126734 (2) (2mks)

16. A rectangle measures 18cm by 12cm.

a. If each dimension is reduced by 2cm, What percentage is :

i. Perimeter of rectangle reduced (2mks)

ii. Area of the rectangle reduced (2mks)

b. If each dimension is reduced by 2% by what percentage is :
i. The perimeter of the rectangle reduced (3mks)

ii. The area of the rectangle reduced (3mks)

17. An institutional water tank has a radius of 2.1m and a height of 450cm.

a. Find the area of water tank (3mks)

b. How many litres of water does the tank carry when full? (3mks)

- c. If the institution uses 5000 liters of water a day, approximately how many days will the full tank last? (2mks)
- d. If the water was to be transferred to a rectangular tank of base area 6.237m^2 . What will be the height of the rectangular tank? (2mks)

18.

- a. The ratio of Mark's earning to Mary's earnings is 5:3. If mark's earning is increased by 12%, his figure becomes sh. 5600. Find the corresponding percentage change in Mary's earning if the sum of their new earnings is sh. 9600. (5mks)

- b. It takes 30minutes for a man to travel a distance at 12km/h .How long will he take to cover same distance at 18km/h? (2mks)
- c. A truck travels 60km on 6 litres of petrol. How far does it travel on 12 litres of petrol? (2mks)
- d. Four men can prune 2000 tea stems in one day, how many days can the same number of men take to prune 10000 tea stems? (1 mk)

THIS IS THE LAST PAGE PRINTED

GOOD LUCK FROM MATHEMATICS DEPARTMENT