

FOCUS A365

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Form 1	Term 1	121 A - Mathematics	27-Okt-17	End Term
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ADM: NAME: CLASS.....

Section A (50 Marks) – Attempt all questions

- Find the value of y in $y = (a + b)(x - c)^2$ given that $a = 5, b = 6, c = 2$ and $x = -3$ 3mks
- Two numbers have an LCM of 1008 and a GCD of 12. If one of the numbers is 48, find the other number. 3mks
- Find the least number of sweets that can be packed into bags which contain either 9 or 15 or 20 or 24 and leave a remainder of 5 in each case. 3mks
- Express the following decimals as fractions
 - $0.\dot{3}\dot{4}$
 - $0.\dot{1}2\dot{3}$
- Evaluate $\frac{1}{2} \left(\frac{3}{5} + \frac{1}{4} \left\{ \frac{7}{3} - \frac{3}{4} \right\} \right) \text{ of } 1\frac{1}{2} \div 5$ 4mks
- Evaluate: $\frac{\sqrt{153 \times 0.18}}{\sqrt{0.68 \times 0.32}}$ 4mks
- Write the following numbers in standard form
 - 852.321
 - 9.32
 - 0.000875
- Express 1470 and 7056 as a product of their prime factors and hence evaluate $\frac{1470^2}{\sqrt{7056}}$ 4mks
- Evaluate: $\frac{\sqrt[3]{675 \times 135}}{\sqrt{2025}}$ 3mks
- Evaluate the following $\frac{16 \times 2 - 4}{4x - 2 - (2x - 1)}$ 3mks
- Find the value of: $0.3 \times 0.94 + (0.304 + 0.123 \div 0.4)$ 3mks
- Kirwa used a ladder to paint the top of a wall. He placed the ladder 4.5 metres away from the wall. The ladder touched the wall at a height of 6.0 metres. Find the height of the ladder. 3mks
- Simplify the following expressions:
 - $7(-x - 4y - 2) - 5(2x - y - 3)$ 3mks
 - $13 + (-3) - 8(-2)(-5)$ 3mks
- Find the value of $\frac{1}{3}(2x - 4y) + 5p - 8$ given that $-p - 6 = 0, x - 2p = 0, y = 0.5x - 1$ 3mks

Section B (50 Marks); answer all question in this section

15. In a mathematics quiz, every correct answer scores 2 marks, 1 mark for every wrong answer and 0 marks for no answer. The test had 30 questions.
- a. Find the maximum and the minimum possible scores a student can score in the test. 2mks
 - b. If Otieno has 20 correct answers, 8 wrong answers and 2 questions he didn't answer, while Omondi had 3 more correct answers than Otieno, and the rest were all wrong answers, find out who got more marks 4mks
 - c. Mary scores 23 marks having got 5 answers wrong. How many questions did she answer right? 4mks
16. Kamau subdivided his rectangular piece of land measuring $6696m$ by $1080m$ into square plots.
- a. Find the size of each square plot 3mks
 - b. Calculate the number of plots he got 3mks
 - c. If he sells half of each plot at one million shillings, how much does he make from $\frac{8}{51}$ of his land? 4mks
17. A square room is covered by a number of whole rectangular slabs of size $60cm$ by $42cm$.
- a. Calculate the least possible area of the room 3mks
 - b. If the owner paints the room at a cost of SH. 1000 per square metre, find the total cost of painting the floor. 3mks
 - c. Given that one can of paint costs SH. 300, and that one can is enough to paint four square metres, find the exact number of cans he bought. 4mks
- 18.
- a. Express 550 as a product of its prime numbers and hence find the least value of y such that $550y$ is a perfect square. 4mks
 - b.
 - i. In two schools, one bell rings 35 minutes and another after 40 minutes. If both bells ring together at 12:40 PM, find what time they last rang together 4mks
 - ii. If the night preps in the two schools ends between 9:30 PM – 11:00 PM, find the time the two bells ring together to show end of preps. 2mks
- 19.
- a. The sum of three consecutive odd integers is 255. Find the numbers. 3mks
 - b. Evaluate: $\frac{4 \times 6 + \frac{1}{25} \div 0.05 + \frac{1}{5}}{(-3) \div (-6) + (-23) - 6}$ of 3 3mks
 - c. A rally car travelled for 2 hours 40 minutes at an average speed of 120km/hr. the car consumes an average of 1 litre of fuel for every 4km. a litre of fuel costs Sh.59. calculate the amount of money he spent on fuel. 4mks