

PRESIDENT'S OFFICE
REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT
JOINT INSPIRING EXAMINATIONS FOR PRIVATE SECONDARY SCHOOLS



(JIEPSS)

FORM TWO JOINT TERMINAL EXAMINATION

CODE 041

BASIC MATHEMATICS

Time: 2:30 Hours

May/ June 2025

Instructions

1. This paper consist of **(10) ten** compulsory Questions
2. Answer **all** questions
3. All writings must be in **blue** or **black** pen except drawings which must be in pencil
4. NECTA mathematical tables , geometric instruments and graphs may be used where necessary
5. Write your Examination number at the top right corner of every page

FOR EXAMINER'S USE ONLY		
QUESTION NUMBER	MARKS	EXAMINER'S SIGNATURE
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
TOTAL MARKS		

1. (a) An electronic device beeps after every 25 minutes. Another device beeps after every 45 minutes. If they beep together at 6.am, at what time they will beep together again?

(b) Write 0.00607049 correct to;

(i) Six decimal places

(ii) 5 significant figures

(c) Find the value of the following Expression leaving your answer to thousandths :

$$\frac{1}{2} + 3\frac{1}{3} + 4$$

2. (a) Arrange the following number in Ascending order

$$\frac{4}{5}, 25\%, 0.5, 0.\dot{5}$$

- (b) The grandmother has given Alfred 960 Candies to eat. In one hour, he has already eaten 25% of it. In the second hours, he ate 65% of the remaining candies find the number of 50% of the remaining candies that has not eaten them yet

3. (a) Mr Kajipenda Bought a tray of eggs (containing 30 eggs) for sh 2000/= . She boiled the eggs using liter of kerosine costing sh 400/=:, and he sold each eggs at a price of shs 100/= each find her percentage profit

(b) A school lorry has a mass of 10t 500kg when loaded with the beans. Find the mass of the lorry if the mass of the beans is 4tonnes 900kg (leave your answer in grams (g))

4. (a) If the interior angle of the regular polygon is $6\frac{1}{2}$ times the exterior angle, how many sides does the polygon have?

(b) A rectangular is 72mm long and 40 mm wide if a triangle with a base of 60mm is equal in area to the area of the rectangular, find the height of the triangle

5. (a) Solve the quadratic equation $P^2 + 11 = 6P$ by completing the square

(b) The length of the parallel sides of a trapezium are $(x + 4)$ and $(x + 2)$. The perpendicular distance between the parallel sides is $(2x - 3)$. Find the area of the trapezium and write your answer in the form of $ax^2 + bx + c$

6. (a) A straight line has a gradient of $\frac{3}{4}$, and it passes through the point $(-1, 2)$ find:
(i) Its equation

(ii) The y-intercept

(b) If $\frac{x-y}{2x+3y} = \frac{-5}{4}$, then $\frac{y}{x} = ?$

(c) A translation takes the origin to $(-2, 5)$. Find when it takes $(5, 4)$

7. (a)(i) Find without using tables or a calculator, the value of $5 + \log \log 36 - \log \log 9$

(ii) Evaluate the following expression using logarithm tables $\frac{3277 \times 0.097}{549}$

(b) Solve for x: $3^{x+10} - 80 = 0$

8. (a) Prove that the sum of the two interior angles of triangle is equal to the exterior angle of the third interior angle

(b) if $\Delta PQR \sim \Delta LMN$ and $\overline{PR} = 20dm$, $\overline{LN} = 10dm$, $\overline{MN} = 12dm$ $\overline{LM} = 9dm$
find the lengths of the other sides of ΔPQR

9. (a) A painter placed a 20 metre ladder against the wall of a house so that the base of the ladder is 4 metre away from the wall. How high does the ladder touch the wall of the ground?

(b) The angle of elevation of the top of the tree from a point on the ground 30m from the base of the tree is 37° . Find the height of the tree

10. (a) There are 60 people at the meeting 35 are the business persons, 32 are employees and 15 are both business persons and employees
- (i) How many are either business persons or employees?
 - (ii) How many are neither business persons nor employees?

(b) The following table shows the distribution of marks scored by 40 students in a monthly test. Draw the frequency polygon to represent this information

Marks(%)	71-80	61-70	51-60	41-50	31-40	21-30
Frequency(f)	1	3	5	10	17	4