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EXAMINATIONS COUNCIL OF ZAMBIA

PRIMARY SCHOOL LEAVING EXAMINATION – 2025



## Mathematics

SUBJECT 3/1

90 MINUTES

TD/M3/PSLE/2025

- 1 Read these instructions carefully.
- 2 **DO NOT** turn this page before you are told. Your teacher will tell you when to turn this page to begin the questions.
- 3 There are **60** questions in this **MATHEMATICS PAPER**. You will be given **EXACTLY 90 MINUTES** to do the questions.
- 4 For each question, four answers are given, but only one of the four is right. Work out which is the **BEST** answer. Then, on your **ANSWER SHEET**, mark the box completely by shading the answer space of the letter of your choice. If you had chosen answer **D** for a question, you would show it like this:-  

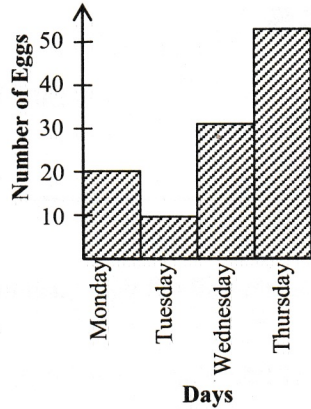
|   |   |   |  |
|---|---|---|--|
| A | B | C |  |
|---|---|---|--|
- 5 You must **SHADE** your answer spaces **COMPLETELY** and **DARKLY** using an **HB** pencil. If you have to change your answer, you must rub out the shading **VERY NEATLY** before shading the new one. **USE A CLEAN RUBBER.**
- 6 When you have finished one page, go straight on without waiting to be told. If you have time left at the end of the question paper, use it to check your work carefully.
- 7 Look at your **ANSWER SHEET**. On the top left hand side are boxes which should have Examination Year, your School Number and Examination Number. It should also say **Subject 3 Paper 1**.
- 8 Look at your **ANSWER SHEET** again. At the bottom left hand side, it should have your Surname, Forename, Subject – **Mathematics**, Name of Primary School and your Secondary School of choice.
- 9 **PUT UP YOUR HAND NOW IF:** You have any question.  
You have the wrong Answer Sheet.  
You will **NOT** be able to ask questions once the examination has begun.

**DO NOT TURN THIS PAGE UNTIL YOU ARE TOLD.**  
**USE ONLY AN HB PENCIL FOR YOUR ANSWERS.**

1 Find the next number in the sequence 20, 23, 26, ...

- A 27
- B 29
- C 30
- D 31

2 The bar chart shows the number of eggs sold in a shop from Monday to Thursday.



On which day was the highest number of eggs sold?

- A Wednesday
- B Tuesday
- C Thursday
- D Monday

3 Express  $9 \times 9 \times 9 \times 9 \times 9$  in index form.

- A  $5^4$
- B  $5^9$
- C  $9^4$
- D  $9^5$

4 3 and 5 are factors of ...

- A 15.
- B 25.
- C 27.
- D 35.

5  $541\ 869 + 367\ 153 =$

- A 908 012
- B 908 022
- C 909 012
- D 909 022

- 6 A school received 467 desks in term one and 57 desks in term two. How many desks did the school receive altogether?

A 524  
 B 514  
 C 424  
 D 414

$$\begin{array}{r} 467 \\ + 57 \\ \hline 524 \end{array}$$

- 7  $587\,324 - 352\,532 =$

A 235 892  
 B 235 792  
 C 234 892  
 D 234 792

$$\begin{array}{r} 587324 \\ - 352532 \\ \hline 234792 \end{array}$$

- 8 Change 25% to a decimal number.

A 0.025  
 B 0.25  
 C 2.5  
 D 25.0

9  $\frac{1}{3} \times \frac{2}{5} =$

A  $\frac{2}{15}$   
 B  $\frac{3}{15}$   
 C  $\frac{2}{8}$   
 D  $\frac{3}{8}$

$$\frac{1}{3} \times \frac{2}{5} = \frac{1 \times 2}{3 \times 5} = \frac{2}{15}$$

- 10 A man bought 28.3kg of fish from one shop and 13.9kg of fish from another shop. How many kilograms of fish did he buy altogether?

A 31.2kg  
 B 32.2kg  
 C 41.2kg  
 D 42.2kg

$$\begin{array}{r} 28.3\text{kg} \\ + 13.9\text{kg} \\ \hline 42.2\text{kg} \end{array}$$

- 11  $24 \times 3 + 8 =$

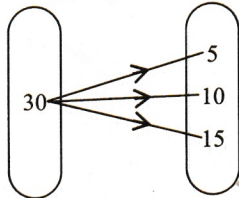
A 264  
 B 80  
 C 72  
 D 60

$$\begin{array}{r} 24 \\ \times 3 \\ \hline 72 \\ + 8 \\ \hline 80 \end{array}$$

12 What is the mode of 3, 7, 2, 3, 9 and 3?

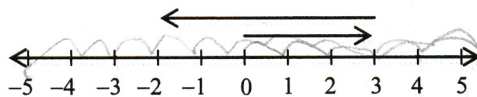
- A 9
- B 5
- C 3
- D 2

13 The mapping shown in the diagram is ...



- A many to one.
- B one to many.
- C one to one.
- D three to one.

14 The following number line shows ...

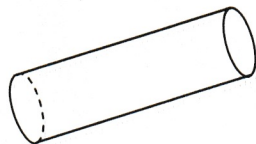


- A  $+3 + (-5) = -2$ .
  - B  $+3 + (+5) = -2$ .
  - C  $-2 + (-3) = -2$ .
  - D  $-2 + (+3) = -2$ .
- 15 Add 5.661 to 23.353.

- A 29.914
- B 29.014
- C 28.914
- D 28.014

Handwritten calculation:  
$$\begin{array}{r} 5.661 \\ + 23.353 \\ \hline 29.914 \end{array}$$

16 What is the name of the following shape?



- A Trapezium
- B Rhombus
- C Cylinder
- D Cone

- 17 The bus fare from one town to another is K210.00. How much would three people pay altogether?
- A K630.00  
 B K214.00  
 C K210.00  
 D K70.00
- 18 What is the name of a polygon with six sides?
- A Decagon  
 B Hexagon  
 C Nonagon  
 D Pentagon
- 19 Kelly had 36 oranges in a basket. If  $p$  oranges were bad and 12 oranges were good, find the value of  $p$ .
- A 432  
 B 48  
 C 24  
 D 3
- 20 A car bought at K49 750.00 was later sold at K41 860.00. Calculate the loss.
- A K8 990.00  
 B K8 890.00  
 C K7 990.00  
 D K7 890.00
- 21 Convert  $\frac{1}{20}$  to a decimal number.
- A 0.5  
 B 0.05  
 C 0.005  
 D 0.0005
- 22  $57.024 - 19.431 =$
- A 48.593  
 B 47.593  
 C 38.593  
 D 37.593
- 23 Given that set  $P = \{c, r, s, t, u\}$  and set  $Q = \{a, b, c\}$ , list set  $P \cup Q$ .
- A  $\{a, b, c, r, s, t, u\}$   
 B  $\{r, s, t, u\}$   
 C  $\{a, b, c\}$   
 D  $\{c\}$

- 24 A man was given a discount of 5% for a shirt costing K300.00. How much was the discount?  
 A K305.00  
 B K285.00  
 C K60.00  
 D K15.00
- 25 The Highest Common Factor of 12 and 18 is ...  
 A 2.  
 B 3.  
 C 6.  
 D 36.
- 26 Find the difference between 400 380 and 113 475.  
 A 513 855  
 B 397 845  
 C 397 105  
 D 286 905
- 27 A woman bought a dress at \$14. If she had \$40, how much did she remain with?  
 A \$26  
 B \$30  
 C \$36  
 D \$54
- 28 Express 0.13 as a percentage.  
 A 0.13%  
 B 1.3%  
 C 13%  
 D 3.1%
- 29 If the perimeter of a square is 20cm, what is the length of the side of this square?  
 A 5cm  
 B 21cm  
 C 24cm  
 D 80cm
- 30 In Arabic numerals, the number MDCLXIV can be written as ...  
 A 1 444.  
 B 1 464.  
 C 1 644.  
 D 1 664.

Handwritten calculations for question 24:  

$$\begin{array}{r} K\ 300.00 \\ \times 5 \\ \hline K\ 305.00 \end{array}$$

Handwritten calculations for question 26:  

$$\begin{array}{r} 400\ 380 \\ - 113\ 475 \\ \hline 397\ 105 \end{array}$$

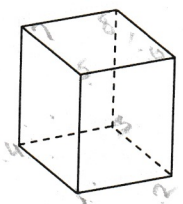
Handwritten calculations for question 28:  

$$\begin{array}{r} 0.13 \\ \times 100 \\ \hline 13 \end{array}$$

- 31 If  $m - 4 > 6$ , then ...
- A  $m < 10$ .
  - ~~B  $m > 10$ .~~
  - C  $m < 2$ .
  - D  $m > 2$ .
- 32 If 500 bottles of water can be packed in one box, how many boxes of the same size are needed to pack 3 000 bottles of water of the same type?
- A 4
  - B 5
  - C 6
  - ~~D 8~~

Handwritten notes for question 32:  $500$ ,  $3000$ , and a diagram showing a box with 500 bottles and a larger box with 3000 bottles.

- 33 How many faces does the following shape have?



- A 4
- B 6
- ~~C 8~~
- D 12

- 34 Which of the following is a prime factor of 20?

- A 20
- ~~B 10~~
- C 5
- D 4

Handwritten notes for question 34:  $20$  and a diagram showing 20 vertical lines grouped into two sets of ten.

- 35 Arrange the following Roman numerals from the biggest to the smallest: X, VII, C, D.

- ~~A D, C, X, VII~~
- B D, C, VII, X
- C D, VII, C, X
- D D, X, VII, C

- 36 A marketeer had 57.45kg of beef. Express this mass to 1 decimal place.

- A 57.0kg
- B 57.3kg
- C 57.4kg
- ~~D 57.5kg~~

Handwritten calculation for question 36:  $57.45$  rounded to  $57.5$  using a number line or similar method.

37 Express the ratio 20 minutes to 60 minutes in its lowest terms.

- A 3 : 1
- B 1 : 3
- C 1 : 20
- D 20 : 1

$$\begin{array}{r} 20 \\ - 160 \\ \hline 320 \end{array}$$

38 A man is paid K50.00 after working for 2 hours. How much will he be paid if works for 4 hours?

- A K100.00
- B K200.00
- C K300.00
- D K400.00

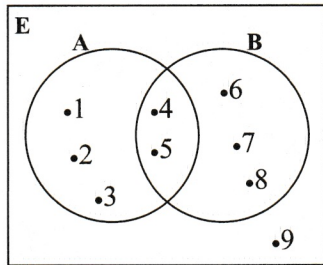
$$\begin{array}{r} K50.00 \\ \times 2 \\ \hline K100.00 \end{array}$$

39 
$$\begin{array}{r} 456 \\ \times 32 \\ \hline \end{array}$$

- A 13 482
- B 13 592
- C 14 492
- D 14 592

$$\begin{array}{r} 456 \\ \times 32 \\ \hline 912 \\ + 13680 \\ \hline 14592 \end{array}$$

40 The Venn diagram shows the sets A and B.



What is the number of elements in set  $A \cap B$ ?

- A 2
- B 3
- C 6
- D 8

41 A man bought a pair of trousers at K200.00. He later sold it at K250.00. Calculate the profit.

- A K450.00
- B K250.00
- C K200.00
- D K50.00

$$\begin{array}{r} K 200.00 \\ + 250.00 \\ \hline K 450.00 \end{array}$$

- 42 If 6 people can build a house in 12 days, how many days will 9 people take to build the same house if they work at the same rate?

A 27  
 B 18  
 C 8  
 D 2

- 43  $617 \div 19 =$

A 32 remainder 10  
 B 32 remainder 9  
 C 30 remainder 8  
 D 30 remainder 4

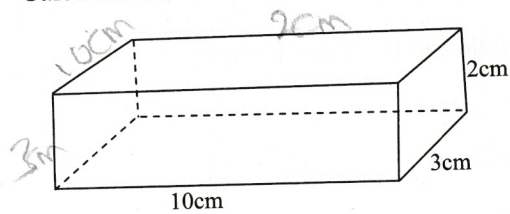
$$\begin{array}{r} 129 \\ \times 19 \\ \hline 108 \\ 228 \\ \hline 2441 \end{array}$$

- 44 Convert 84 to a number in base 8.

A  $104_{\text{eight}}$   
 B  $120_{\text{eight}}$   
 C  $124_{\text{eight}}$   
 D  $421_{\text{eight}}$

$$\begin{array}{r} 84 \\ \times 8 \\ \hline 672 \end{array}$$

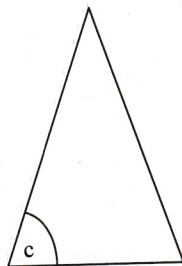
- 45 Calculate the volume of the following shape.



A  $60\text{cm}^3$   
 B  $30\text{cm}^3$   
 C  $20\text{cm}^3$   
 D  $15\text{cm}^3$

$$\begin{array}{r} 2\text{cm} \\ \times 3\text{cm} \\ \hline 6\text{cm}^2 \\ \times 10\text{cm} \\ \hline 60\text{cm}^3 \end{array}$$

- 46 The angle marked with letter c in the following triangle is called ...



A a right angle.  
 B a straight angle.  
 C an acute angle.  
 D an obtuse angle.

47 
$$\begin{array}{r} 111_{\text{two}} \\ + 11_{\text{two}} \\ \hline \end{array}$$



- A 1011<sub>two</sub>
- B 1010<sub>two</sub>
- C 1001<sub>two</sub>
- D 1000<sub>two</sub>

48  $\frac{1}{6} \div \frac{2}{3} =$

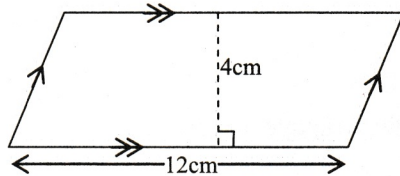


- A  $\frac{1}{2}$
- B  $\frac{1}{3}$
- C  $\frac{1}{4}$
- D  $\frac{2}{9}$

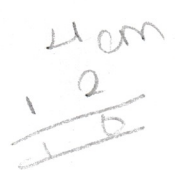
49 Arrange -18, 32, -7 and 16 from the smallest to the biggest number.

- A -18, -7, 16, 32
- B -7, -18, 16, 32
- C 32, 16, -18, -7
- D 32, 16, -7, -18

50 Calculate the area of the following parallelogram.

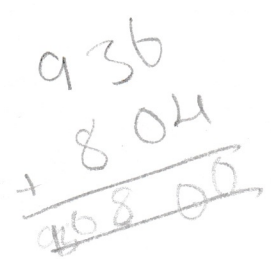


- A 3cm<sup>2</sup>
- B 16cm<sup>2</sup>
- C 24cm<sup>2</sup>
- D 48cm<sup>2</sup>



51 Round off 936 804 to the nearest thousand.

- A 940 000
- B 937 000
- C 936 800
- D 936 000



52 
$$\begin{array}{r} 413_{\text{five}} \\ - 134_{\text{five}} \\ \hline 321 \end{array}$$

- A 324<sub>five</sub>
- B 321<sub>five</sub>
- C 224<sub>five</sub>
- D 221<sub>five</sub>

53 A man had 12m of wire for sale. He sold  $\frac{2}{3}$  of the wire. How many metres of wire did he sell?

- A 24m
- B 8m
- C 6m
- D 4m

$$\frac{2}{3} \times 100$$
  

$$\frac{2}{10} \times 100$$

54 Linda used 25% of her farm to grow tomatoes. What fraction of the farm was used to grow tomatoes?

- A  $\frac{4}{4}$
- B  $\frac{3}{4}$
- C  $\frac{2}{4}$
- D  $\frac{1}{4}$

$$\frac{25 \times 100}{100}$$
  

$$\frac{400}{100} = 4$$
  

$$\frac{4}{100} = \frac{1}{25}$$

55 Convert  $\frac{2}{5}$  to a percentage.

- A 80%
- B 50%
- C 40%
- D 20%

$$\frac{2}{5} \times 100$$
  

$$2 \times 100 = 200$$
  

$$\frac{200}{5} = 40$$

56 A bus covered a distance of 144km in 2 hours. What was the average speed of the bus?

- A 72 km/h
- B 140 km/h
- C 146 km/h
- D 288 km/h

$$144 \text{ km}$$
  

$$\times 2$$
  

$$\hline 288$$

$$\frac{2}{5} - \frac{1}{3}$$

$$\frac{1}{15}$$

57  $\frac{2}{5} - \frac{1}{3} =$

A  $\frac{4}{15}$

B  $\frac{1}{15}$

C  $\frac{3}{5}$

D  $\frac{1}{3}$

58  $5.1 \div 1.7 =$

A 0.003

B 0.03

C 0.3

D 3

$$\begin{array}{r} 5.1 \\ -1.7 \\ \hline \end{array}$$

59 Evaluate  $7^2$ .

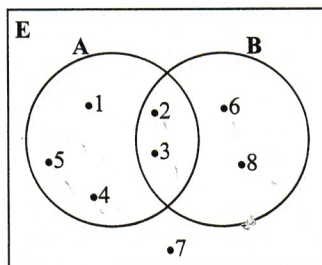
A 49

B 14

C 9

D 5

60 The following diagram shows sets A and B.



Set  $A \cup B$  is ...

A  $\{2, 3\}$ .

B  $\{1, 4, 5, 6, 8\}$ .

C  $\{1, 2, 3, 4, 5, 6, 8\}$ .

D  $\{1, 2, 3, 4, 5, 6, 7, 8\}$ .

**STOP! PLEASE CHECK ALL YOUR WORK CAREFULLY**