

PLE 2025 Mathematics Past Paper & Answers

Primary Leaving Examination · Primary 7 · Suggested answers with working (not the official UNEB marking guide)

Section A

40 marks · 2 marks each

1

Write 5,326 in words.

Five thousand, three hundred twenty-six

2

Use =, < or > to complete: $-3 \dots +3$

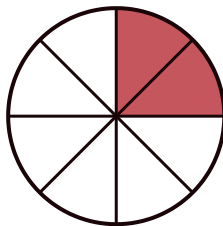
$-3 < +3$

Negative numbers are less than positive numbers.

3

Shade $\frac{1}{4}$ of the diagram.

The circle has 8 equal parts. $\frac{1}{4} = \frac{2}{8}$, so shade **2 parts**.



4

Convert 1,560 grammes to kilogrammes.

$1,000 \text{ g} = 1 \text{ kg} \rightarrow 1,560 \div 1,000$

$= 1.56 \text{ kg}$

5

Given $\xi = \{a, b, c, d, e, f, g, h\}$, $M = \{a, b, e, f\}$ and $K = \{b, d\}$, find $n(M \cup K)'$.

$M \cup K = \{a, b, d, e, f\}$

$(M \cup K)' = \{c, g, h\}$

$n(M \cup K)' = 3$

6

Find the next number: 128, 64, 32, 16, ...

Each number is divided by 2: $16 \div 2$

$= 8$

7

Using a protractor, draw an angle of 85° .

Draw a straight line and mark the vertex. Place the protractor's centre on the vertex with the base line on 0° , mark the point at 85° and join it to the vertex. Label the angle 85° .

8

Round off 37,594 to the nearest thousands.

The hundreds digit is 5 (≥ 5), so round up.

38,000

9

6,625 people attended; 5,879 were adults. Find the number of children.

$$6,625 - 5,879$$

= 746 children

10

Work out $(25 \times 26) + (24 \times 25)$.

$$= 25 \times (26 + 24) = 25 \times 50$$

= 1,250

11

Given $a = \frac{1}{2}$ and $b = 12$, find $8a + ab$.

$$8 \times \frac{1}{2} + \frac{1}{2} \times 12 = 4 + 6$$

= 10

12

Atim sold every 4 oranges for sh 1,500. Find the money from 200 oranges.

$$\text{Groups of 4: } 200 \div 4 = 50$$

$$50 \times \text{sh } 1,500$$

= sh 75,000

13

Find the median of 6, 13, 7, 11, 15, 9.

Arrange: 6, 7, **9, 11**, 13, 15

$$\text{Median} = (9 + 11) \div 2$$

= 10

14	Peter is twice as old as Abdul. The sum of their ages is 72 years. Find Abdul's age. Let Abdul = x, Peter = $2x \rightarrow x + 2x = 72 \rightarrow 3x = 72$ $x = 24$ years
15	sh 2,000,000 borrowed; interest of sh 720,000 after 2 years. Find the rate per year. Interest per year = $720,000 \div 2 = 360,000$ Rate = $360,000 \div 2,000,000 \times 100$ = 18% per year
16	Annet visited in March 2025 and will visit again after 16 months. When? 12 months $\rightarrow$ March 2026; 4 more months $\rightarrow$ July 2026 July 2026
17	Find the value of k in the diagram. The interior angle at the left vertex = 40° (vertically opposite angles). The exterior angle 110° = sum of the two interior opposite angles: $k + 40^\circ = 110^\circ$ $k = 70^\circ$
18	A rectangular chart is 85 cm long and 60 cm wide. Find the length of tape along the edges. Perimeter = $2 \times (85 + 60) = 2 \times 145$ = 290 cm
19	Uniform intervals: 7:30 a.m., 9:50 a.m., 12:10 p.m., ..., 4:50 p.m. Find the 4th time. Interval = $9:50 - 7:30 = 2$ hours 20 minutes 12:10 p.m. + 2 h 20 min = 2:30 p.m.
20	A die is rolled once. Probability the top face shows a factor of 3. Factors of 3 on a die: $\{1, 3\} \rightarrow 2$ outcomes out of 6 $P = \frac{2}{6} = \frac{1}{3}$

Section B

60 marks

21 (a)Find n and m in the base five addition $1m2_{\text{five}} + 224_{\text{five}} = 40n_{\text{five}}$. **(02 marks)**Units: $2 + 4 = 6 = 1 \text{ five remainder } 1 \rightarrow \mathbf{n = 1}$, carry 1.Fives: $m + 2 + 1 = 5$ (write 0, carry 1) $\rightarrow \mathbf{m = 2}$.Check: $1 + 2 + 1 = 4 \checkmark$

$$\mathbf{m = 2, n = 1}$$

21 (b)Write the number expanded as $(6 \times 10^4) + (3 \times 10^2) + (5 \times 10^1) + (9 \times 10^0)$. **(02 marks)**

$$60,000 + 300 + 50 + 9$$

$$\mathbf{= 60,359}$$

22Maths set sh 5,000; a dozen books sh 24,000; a pen costs half the price of a book. Cost of 8 sets, 3 books and 5 pens. **(06 marks)**

$$1 \text{ book} = 24,000 \div 12 = \text{sh } 2,000; 1 \text{ pen} = \text{sh } 1,000$$

$$8 \text{ sets} = \text{sh } 40,000 \cdot 3 \text{ books} = \text{sh } 6,000 \cdot 5 \text{ pens} = \text{sh } 5,000$$

$$\mathbf{\text{Total} = \text{sh } 51,000}$$

23 (a)Solve $8 - 3t \geq 23$. **(03 marks)**

$$-3t \geq 23 - 8 \rightarrow -3t \geq 15$$

Divide by -3 and reverse the sign:

$$\mathbf{t \leq -5}$$

23 (b)Write the solution set for $-2 < x < 2$. **(01 mark)**

$$\mathbf{\{-1, 0, 1\}}$$

24800 guests each used 400 ml of water from 20-litre tanks. Find the number of full tanks used. **(04 marks)**

$$\text{Total} = 800 \times 400 \text{ ml} = 320,000 \text{ ml} = 320 \text{ litres}$$

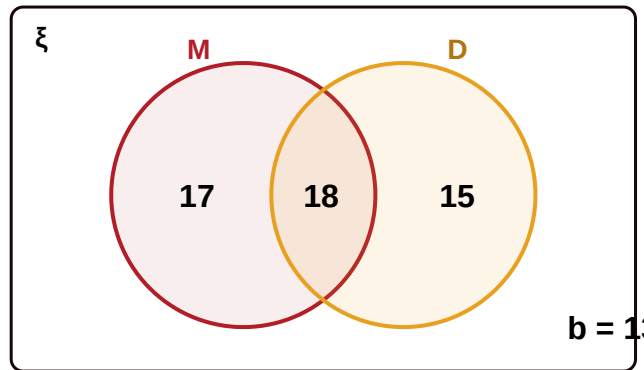
$$\text{Tanks} = 320 \div 20$$

$$\mathbf{= 16 \text{ tanks}}$$

25 (a)

Represent the information (music 35, debating only 15, music only 17, b neither, 28 do not like music) on a Venn diagram. **(04 marks)**

Both = $35 - 17 = 18$. Not music: $15 + b = 28 \rightarrow \mathbf{b = 13}$.



25 (b)

Calculate the total number of pupils in the class. **(02 marks)**

$$17 + 18 + 15 + 13$$

= 63 pupils

26 (a)(i)

State the bearing of the church from the mosque. (01 mark)

The line makes 30° with the west at the church, so the mosque is on 240° from the church. Back bearing: $240^\circ - 180^\circ$

$$= 060^\circ$$

26 (a)(ii)

State the bearing of the church from the hospital. (01 mark)

Hospital from church = 140° . Back bearing: $140^\circ + 180^\circ$

$$= 320^\circ$$

26 (b)

Find, in metres, the shortest distance from the hospital to the mosque (1 cm : 50 m).
(02 marks)

Measure the straight line from the hospital to the mosque on the printed drawing, then multiply by 50.

e.g. 7.1 cm $\times$ 50 m

$\approx 355 \text{ m}$

Your answer depends on your measurement of the original paper (accept close values).

27

Ten goats bought for sh 800,000; six sold at sh 110,000 each. Price of each remaining goat for a 25% profit. **(06 marks)**

Required selling price = $125\% \times 800,000 = \text{sh } 1,000,000$

Six goats: $6 \times 110,000 = \text{sh } 660,000$

Remaining 4 goats: $1,000,000 - 660,000 = \text{sh } 340,000$

Each goat = sh 85,000

28

M $\rightarrow$ K at 75 km/h for 2 h, 1 h lunch at K, then 3 h to L. Average speed 55 km/h. Find distance K to L. **(05 marks)**

Total time = $2 + 1 + 3 = 6$ hours

Total distance = $55 \times 6 = 330$ km

M to K = $75 \times 2 = 150$ km

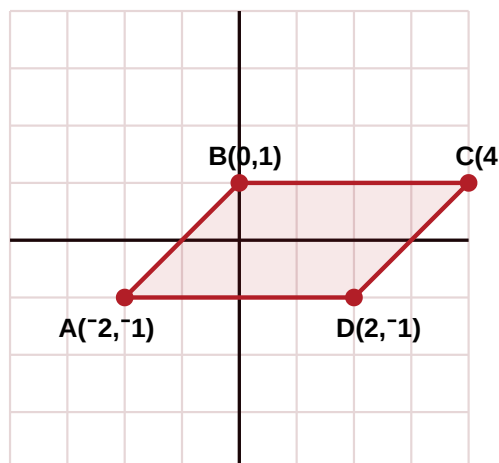
K to L = $330 - 150 = 180$ km

29

A(-2, -1), B(0, 1), C(4, 1) are vertices of parallelogram ABCD. Plot, find D and join. **(05 marks)**

B $\rightarrow$ C moves 4 units right, so A $\rightarrow$ D also moves 4 units right: D = $(-2 + 4, -1)$

D (2, -1)



30

Construct triangle LMN: LM = 6.5 cm, $\angle NLM = 45^\circ$, $\angle LMN = 60^\circ$; then a perpendicular from N to LM at K. **(05 marks)**

1. Draw LM = 6.5 cm.
2. At L, construct 90° and bisect it to get 45° .
3. At M, construct 60° (equilateral arc method).
4. Extend both arms to meet at N.
5. (b) With centre N, cut LM at two points; from these points draw arcs below LM to meet; join N to the meeting point — it crosses LM at K ($NK \perp LM$).

31

Right-angled triangle RST (RS = 16 cm, ST = 12 cm, RT = 20 cm, RT a diameter) cut from a circle. Find the remaining area ($\pi = 3.14$). **(06 marks)**

Radius = $20 \div 2 = 10$ cm $\rightarrow$ Circle area = $3.14 \times 10 \times 10 = 314$ cm²

Triangle area = $\frac{1}{2} \times 16 \times 12 = 96$ cm²

Remaining area = $314 - 96 = 218$ cm²

32

Janat got $\frac{3}{8}$, Adam $\frac{2}{5}$ and Moses $\frac{1}{3}$ of the land. Who got the largest share? **(05 marks)**

LCD of 8, 5 and 3 = 120

$$\frac{3}{8} = \frac{45}{120} \cdot \frac{2}{5} = \frac{48}{120} \cdot \frac{1}{3} = \frac{40}{120}$$

Adam got the largest share