

Prime
Consult

THE PRIME EXAMINATIONS 2024
P.6 MID TERM III
MATHEMATICS (New Curriculum)

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Time allocated 2 hours 30 minutes



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READ THE FOLLOWING INSTRUCTIONS CAREFULLY

1. This paper has two sections: A and B. Section A has 20 questions (40 Marks) and Section B has 12 questions. (60 Marks)
2. Answer ALL questions. All the working for both sections A and B must be shown in the spaces provided.
3. All working must be done using a blue or black ball point pen or ink. Any work done in pencil other than on graphs and diagrams will not be marked.
4. No calculators are allowed in the examination room.
5. Unnecessary changes in your work and handwriting that cannot be read easily may lead to loss of marks.
6. Do not fill anything in the table indicated

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QUESTION NUMBER	MARKS ATTAINED	INITIALS
1 - 5		
6 - 10		
11 - 15		
16 - 20		
21 - 22		
23 - 24		
25 - 26		
27 - 28		
29 - 30		
31 - 32		
TOTAL		

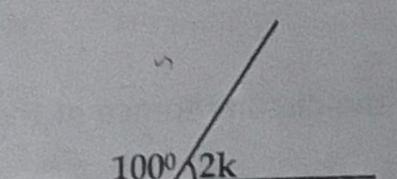
APPROVED

Consultant
Mathematics Department (PEC)

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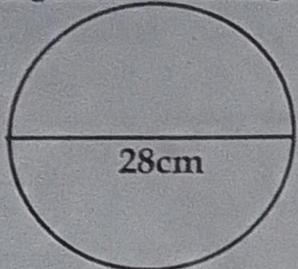
Section A. (40 Marks)

<p>1 Work out: $24 \div 8$</p> <p><small>WARNING: Not to be reproduced electronically</small></p>	<p>2 Write 69 in Roman numerals.</p>
<p>3 Show 3042 on the abacus.</p> <p>Th H T O</p> <hr/>	<p>4 Shade the complement of set T in the diagram below.</p>
<p>5 Solve for y: $3y - 12 = 6$</p>	<p>6 Write 2975 in expanded form using powers of ten.</p>
<p>7 The diameter of a bicycle wheel is 64cm. Find its radius.</p>	
<p>8 Using a pair of compasses, ruler and a pencil only, construct an angle of 45°</p>	
<p>9 Workout: $-9 - -4$</p>	<p>10 Given that $Y = \frac{1}{8}$ and $Z = \frac{1}{10}$, Find the value of $Y + Z$</p>

<p>11 In a class of 72 pupils, the ratio of boys to girls is 3:5 respectively. How many girls are in the class?</p>	<p>12 Express 5.8kg as grammes.</p>
<p>13 A fifty minutes assembly ended at 10:10am. At what time did it start?</p>	<p>14 Find the value of k in the figure below.</p> 
<p>15 The area of a square book is 64cm^2. Find the length of the book.</p>	<p>16 Ouma passed 30% of the questions in an English test of 50 questions. How many questions did Ouma pass?</p>
<p>17 Atuhaire bought milk in packets of 750ml. If she bought 3000ml of milk, how many packets did She buy?</p>	<p>18 The LCM of two numbers is 60. If their GCF is 3. Find the product of the numbers.</p>
<p>19 Given 65421, find the value of 6 and 4.</p>	<p>20 If 6 men slash a compound in 8 hours, how many men are required to do the same work in 12 hours?</p>

Section B. (60 Marks)

21 The diagram below represents a circular fish pond.



(a) Find the area of the fish pond.

(03 marks)

(b) Find the circumference of the fish pond.

(02 marks)

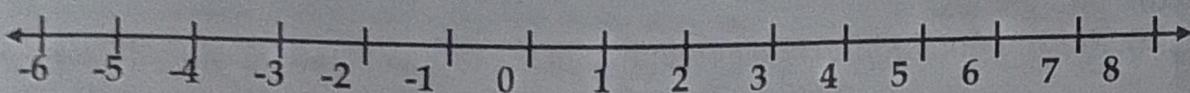
22 (a) Using a pair of compasses, a ruler and a pencil only, construct an equilateral triangle in a circle of radius 3.5cm

(04 marks)

(b) Measure the length of the triangle.

(01 mark)

- 23 (a) Workout $+6 - +2$ using a number line. (03 marks)



- (b) Find the additive inverse of -4 (02 marks)

- 24 The sum of 3 consecutive counting numbers is 54. Find the numbers. (05 marks)

- 25 A motorist left town A at 8:15pm moving at a speed of 80km/h and reached after $2\frac{1}{2}$ hours.

- (a) At what time did the motorist reach town B? (03 marks)

- (a) How far is town B from town A? (02marks)

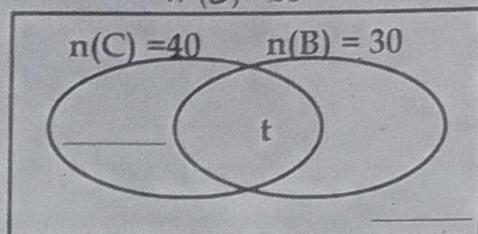
26

In a class of 65 girls, 40 girls like playing Chess(C), 30 girls like playing Basketball(B), t girls like playing both games while 4 girls like playing none of the two games.

(a) Use the above information and complete the Venn diagram below.

(02marks)

$$n(\mathcal{E}) = 65$$



(b) Find the value of t

(02 marks)

27

Complete the shopping bill table below.

(05 marks)

ITEM	QUANTITY	UNIT PRICE	AMOUNT
Bread	3 loaves	sh 4000 per loaf	sh _____
Rice	_____ kg	sh 3000 per kg	sh 13,500
Milk	$2\frac{1}{2}$ litres	sh _____ per litre	sh _____
Total Expenditure			sh 28,500

28

(a) Workout: $\frac{1}{2} + \frac{2}{5} \times \frac{1}{3}$

(02 marks)



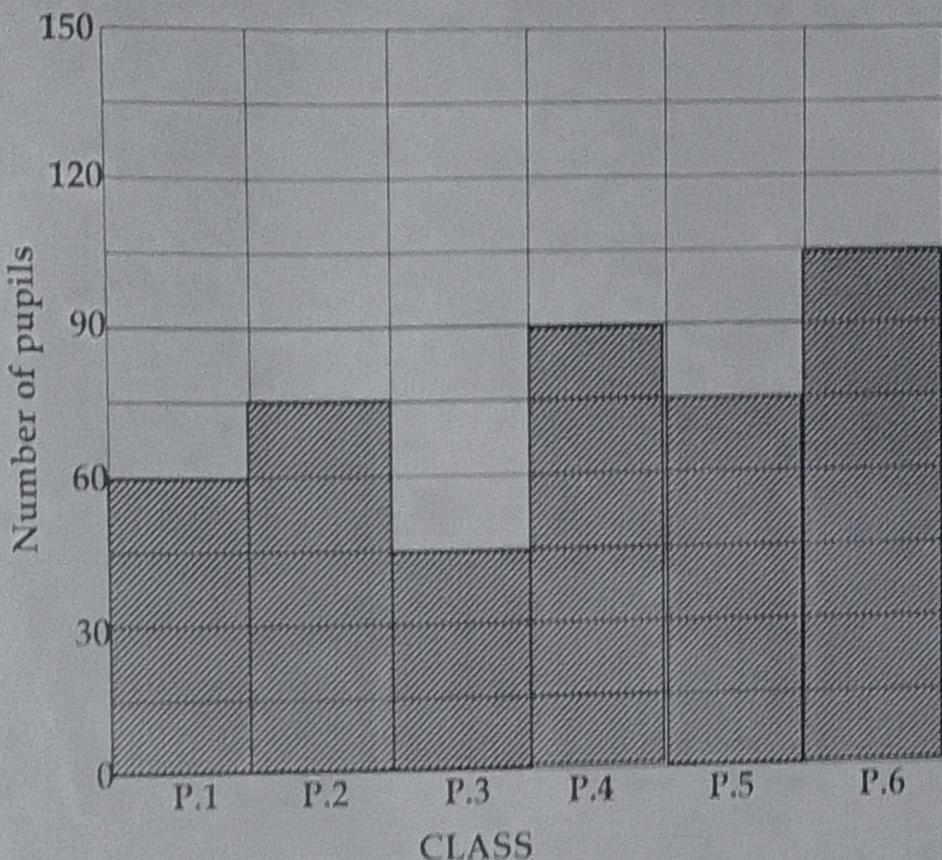
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(b) Simplify: $\frac{0.045 \times 2.6}{1.8}$

(03 marks)

29 The graph below shows the number of pupils in each class in a school.



(a) How many pupils are in P.3 class?

(02 marks)

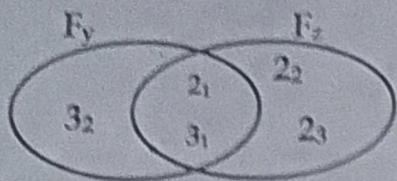
(b) Find the total number of pupils in P.2 and P.6.

(02marks)

(c) How many more pupils were in P.4 than P.1?

(02marks)

30 Study the Venn diagram below and use it to answer the questions that follow.



- (a) Find the value of;
(i) y (02 marks) (ii) z (02 marks)

- (b) Find the GCF of F_y and F_z . (01 mark)

31 (a) Workout: $2 - 4 \times 3 + 16$ (02 marks)

(b) Add: $4728 + 6382$ (02 marks)

32 In a mathematics test given to a class, marks scored are shown in the table below.

Marks scored	4	5	6	7	9
No. of pupils	4	9	14	8	5

(a) What was the modal mark? (02 marks)

(b) How many pupils were in the class? (02 marks)

(c) Calculate the range score. (02 marks)

THE PRIME MID TERM III EXAMINATIONS 2024

P.6 MATHEMATICS MARKING GUIDE

SECTION A (40 MARKS)

NO	SOLUTION	MA RKS	COMME NT	NO	SOLUTION	MA RKS	COMMEN T
1	$24 \div 4 = 3$	B ₂	Follow through	2	$69 = 60 + 9 = LXIX$	B ₂	Follow through
3	<p>Th H T O</p> <p>3 0 4 2</p>	B ₂	Follow through	4		M ₁ A ₁	Follow through
5	$3y - 12 = 6$ $3y - 12 + 12 = 6 + 12$ $\frac{3y}{13} = \frac{18}{3}$ $y = 6$	M ₁ A ₁	Follow through	6	$3\ 2\ 1\ 0$ $2\ 9\ 7\ 5$ $(2 \times 10^3) + (9 \times 10^2) + (7 \times 10^1) + (5 \times 10^0)$	M ₁ A ₁	Follow through
7	$\frac{32}{64cm}$ $\underline{2} = 32cm$	M ₁ A ₁	Follow through	8		M ₁ A ₁	Follow through
9	$-9 - 4$ $-9 - (+4)$ $-9 - 4$ $\underline{-13}$	M ₁ A ₁	Follow through	10	$\frac{1}{8} + \frac{1}{10} = \frac{(5 \times 1) + (4 \times 1)}{40}$ $\frac{5+4}{40}$ $\frac{9}{40}$	B ₂	Follow through
11	$TR = 3+5 = 8$ $No\ of\ girls = \frac{5}{8} \times 72\ girls$ $= 5 \times 9\ girls$ $= 45\ girls$	M ₁ A ₁	Follow through	12	$1kg = 1000g$ $5.8kg = \frac{58}{10} \times 1000g$ $= 5800g.$	M ₁ A ₁	Follow through
13	$S.T = E.T - D$ $\frac{9}{10} \frac{60}{10} \quad 70 - 50 = 20$ $\underline{-50}$ $9; 20am$	M ₁ A ₁	Follow through	14	$2k + 100^\circ = 180^\circ$ $2k = 180^\circ - 100^\circ$ $\frac{2k}{2} = \frac{80}{2}$ $k = 40^\circ$	M ₁ A ₁	Follow through

15 $A = S^2$
 $\sqrt{64\text{cm}^2} = \sqrt{S^2}$
 $8\text{cm} = S$
 $S = 8\text{cm.}$

17 $\frac{2400\text{ml}}{750\text{ml}}$
4 packets

19 Th Th H T O
6 5 4 2 1
 $4 \times 100 = 400$
 $6 \times 10,000 = 60,000$

M₁
A₁
Follow through

16 $\frac{30}{100} \times 50$
= 15 questions.

18 Product = LCM x GCF
= 60×3
= 180.

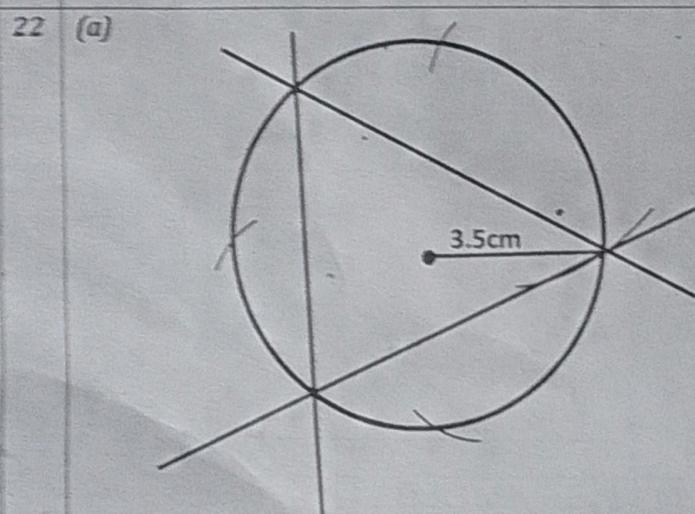
20 In 8 hours you need 6 men
In 1 hour you need 8×6 men
In 12 hours you need $\frac{4}{12} \times 6$ men
= 4 men.

M₁
A₁
Follow through

21 (a) $A = \pi r^2$
 $A = \frac{22}{7} \times 14\text{cm} \times 14\text{cm}$
 $A = (22 \times 2 \times 14)\text{cm}^2$
 $A = 616\text{cm}^2$

(b) Circumference
 $C = \pi D$
 $C = \frac{22}{7} \times 28\text{cm}$
 $C = 88\text{cm}$

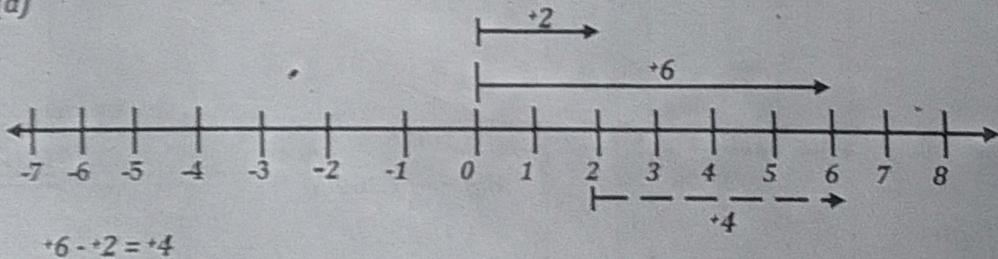
M₁
M₁
A₁
M₁
B₁
05



R₁
C₁
J₁
L₁
05

(b) $6\text{cm} \pm$

23 (a)



M₁
A₁
M₁
A₁
04

(b) $-4 + y = 0$
 $y = 4$

24

$$\begin{aligned}
 (a) & x, x+1, x+2 \\
 x+x+1+x+2 & = 54 \\
 3x+3 & = 54 \\
 3x & = 54 - 3 \\
 \frac{3x}{3} & = \frac{51}{3} \\
 x & = 17 \\
 17, 18, 19
 \end{aligned}$$

M₁ **A₁** **M₁** **A₁** **M₁**
04

25

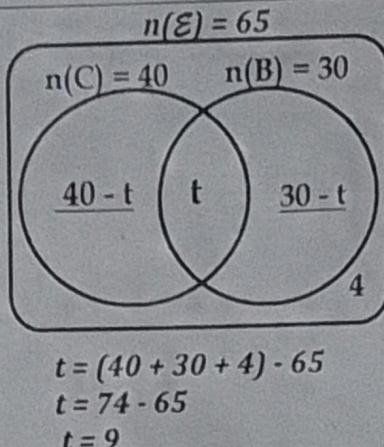
$$\begin{aligned}
 (a) A.T &= D.T + D \\
 &= 8 \quad 15 \\
 &\underline{2 \quad 30} \\
 &\underline{10:45pm}
 \end{aligned}$$

$$D = S \times T$$

$$\begin{aligned}
 &= \frac{40}{80 \text{ km}} \times \frac{5}{2} \text{ h} \\
 &= 40 \text{ km} \times 5 \\
 &\equiv 200 \text{ km.}
 \end{aligned}$$

M₁ **Follow through**
A₁
M₁

26



B₁ **Follow through**
B₁
B₁
M₁
M₁
05

27

ITEM	QUANTITY	UNIT PRICE	AMOUNT
Bread	3 loaves	sh.4000	sh.12000
Rice	4.5 kg	sh.3000	sh. 13500
Milk	2 $\frac{1}{2}$ litres	sh.1200	sh.3000
<i>Total expenditure</i>			sh.28,500

$$\begin{aligned}
 \text{Rice} & \quad \text{Milk} \\
 \frac{45}{sh.13500} & \quad sh.28,500 - (12000 + 13500) \\
 \underline{sh.3000} & \quad sh.28500 - sh.25500 \\
 \underline{10} & \quad \underline{sh.3000} \\
 4.5 \text{kg} & \quad sh.3000 \div \frac{5}{2} \\
 & \quad sh.3000 \times \frac{2}{5} \\
 & \quad sh.1200
 \end{aligned}$$

$$\begin{aligned}
 \text{Bread} & \\
 3 \text{ loaves} \times sh.4000 & \\
 = 12000 &
 \end{aligned}$$

B₁ **Follow through**
B₁
B₁
M₁
A₁
05

28

$$\begin{aligned}
 \frac{1}{2} X \frac{2}{5} X \frac{1}{3} & \\
 \frac{1}{2} + \frac{2}{15} & = \frac{15+4}{30} \\
 & = \frac{19}{30} \\
 b) & \\
 \left(\frac{45}{1000} X \frac{26}{10} \right) + \frac{18}{10} & \\
 \frac{5}{45} X \frac{13}{26} X \frac{10}{18} & \\
 \frac{65}{1000} & \\
 0.065 &
 \end{aligned}$$

M₁ **Follow through**
A₁
B₁
M₁
A₁
05

$$\begin{aligned}
 (a) & 45 \text{ pupils.} \\
 (b) & 75 + 105 \\
 & 180 \text{ pupils} \\
 (c) & 90 - 60 \\
 & = 30
 \end{aligned}$$

B₁ **Follow through**
M₁
A₁
M₁
A₁
05

29

			M_1	Follow through
30	(i) $y = 3 \times 3 \times 2$ $y = 9 \times 2$ <u>$y = 18$</u>	(ii) $Z = 2 \times 3 \times 2 \times 2$ $Z = 6 \times 4$ <u>$Z = 24$</u>	A_1	
	(b) $G.C.F = 2 \times 3$ <u>$\equiv 6$</u>		M_1	
			A_1	05
31	(a) $2 \cdot (4 \times 3) + 16$ $2 \cdot 12 + 16$ $(2 + 16) \cdot 12$ $18 \cdot 12$ $= 6$		M_1	Follow through
	(b) $\begin{array}{r} 1 & 1 & 1 \\ 4 & 7 & 2 & 8 \\ +6 & 3 & 8 & 2 \\ \hline 1 & 1 & 1 & 0 \end{array}$		A_1	
			B_1	
			M_1	
			A_1	
			05	
32	(a) Modal mark = 6 $No. of pupils = 4 + 9 + 14 + 8 + 5$ $= 40$ pupils.		M_1	Follow through
	(b) Range = $9 - 4$ $= 5$		A_1	
			B_1	
			M_1	
			A_1	
			05	