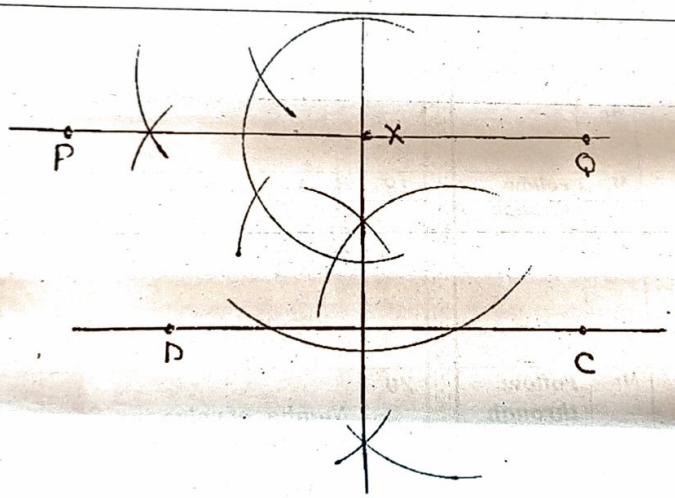
THE PRIME MAGIC SET I EXAMINATIONS 2024

P.7 MATHEMATICS MARKING GUIDE

SECTION A(40 MARKS)

NO	SOLUTION	MARKS	COMMENT
1	6 7 -2 5 4 2	B_2	Follow through
3	(6x +x) + (4m - 3m) 7x+m	M_1 A_1	Follow through
5	1 3. 8 4 6 +0 1 1 4	M_1 A_1	Follow through
6		B_1 B_1	Follow through
7	1000g = 1kg $1g = \left(\frac{1}{1000}\right)kg$ $1750g = \left(\frac{1}{1000} x1750\right) kg$ $= \left(\frac{175}{100}\right) kg$ = 1.75kg	M_1 A_1	Follow through
9	2c - 1 = 4 (finite 7) 2c - 1+1 = 4 + 1(finite7) 2c = 5 (finite 7) 2c = 5 + 7 (finite 7) $\frac{2c}{2} = \frac{12}{2}$ c = 6	M_1 A_1	Follow through

NO	SOLUTION	MARKS	COMMENT
2	40 9 XL IX XLIX	B_2	Follow through
4	$(N \cup M)'$	B_2	Follow through
8	$\left(\frac{5}{\frac{20}{4}}\right)$ pictures 5 pictures	M_1 A_1	Follow through
10	84, 56, 35, 20, 10, 4, 1 28 21 15 10 6 3	M_1 A_1	Follow through

11

$7x-30^0+4x-10^0=180^0$

$7x+4x-30^0-10^0=180^0$

$11x-40^0=180^0$

$11x=180^0+40^0$

$\frac{11x}{11}=\frac{220^0}{11}$

$x=20^0$

M_1 A_1 Follow through

12

$S=D\div T$

$=170km\div\frac{17h}{4}$

$=\frac{10}{\cancel{170}}km\times\frac{4}{\cancel{17h}}$

$=40km/h.$

M_1 A_1 Follow through

13

B	No	R
2	11	1
2	5	1
2	2	0
	1	

$11=1011_{two}$

B_2 Follow through

14

2	6	8
	3	4

2 girls.

M_1 A_1 Follow through

15

$SI=P\times R\times T$

$=sh360,000\times\frac{15}{100}\times 4$

$=216,000$

M_1 A_1 Follow through

16

$T=(2,-3)$

B_1 B_1 Follow through

17

17 2 0 hs

+2 3 0 hs

19 50hours

$\frac{1}{2}\times\cancel{60}^{30}$

30min

M_1 A_1 Follow through

18

$2k-6+6\leq -10+6$

$2k\leq -4$

$\frac{\cancel{2}k}{\cancel{2}}\geq\frac{-4^2}{\cancel{2}}$

$k\leq -2$

M_1 A_1 Follow through

19

$3kg=sh.27000$

$5kg=sh.\frac{\cancel{27000}^{9000}}{\cancel{3}}\times 5$

$=sh.\ 45000.$

M_1 A_1 Follow through

20

Number of poles

= Distance ÷ interval

$=\frac{\cancel{40m}^{8}}{\cancel{5m}_{1}}$

= 8 poles

1km = 1000m

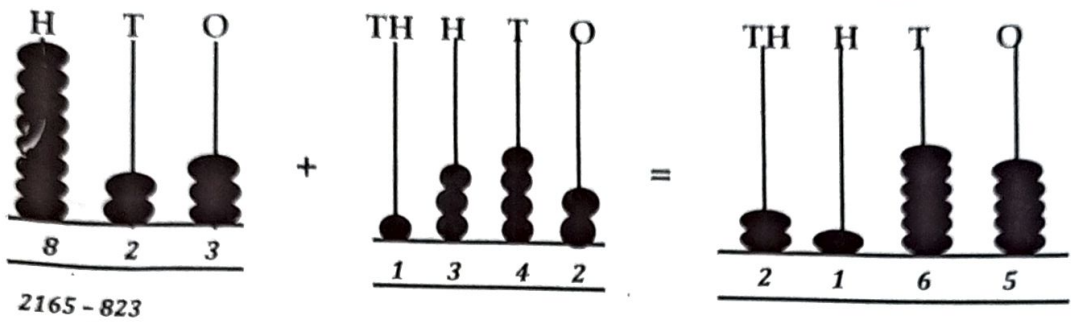
$0.04km=\frac{4}{100}\times 1000$

$=40m$

M_1 A_1 Follow through

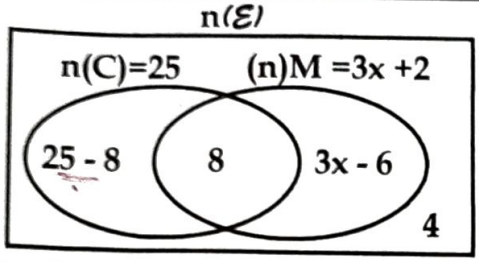
SECTION B (60 Marks)

21



2165 – 823
= 1342

22 a)



05

b) $3x - 6 + 8 = 26$
$3x + 2 = 26$
$3x + 2 - 2 = 26 - 2$
$\frac{3x}{3} = \frac{24}{3}$
$x = 8$

23 a) $\left(\frac{24}{100} - \frac{8}{100}\right) \div \left(\frac{1}{100} + \frac{3}{100}\right)$

$\frac{16}{100} \div \frac{4}{100}$

$\frac{4}{16} \times \frac{1}{100}$

$\frac{1}{4}$

$5\frac{1}{3}$

b) (3.41 + 5.06) – 7.31
8.47 – 7.31

3.41	8.47
+5.06	-7.31
8.47	1.16

24 a) $x + 45^0 + 45^0 = 180^0$
$x + 90^0 = 180^0$
$x + 90^0 - 90^0 = 180^0 - 90^0$
$x = 90^0$

b) $y = x + 35^0$ (sum of 2 opp int <s = ex <s)
$y = 90^0 + 35^0$
$y = 125^0$
$y = 135^0$

05

25

Sugar
sh. 5300
x 3
sh 15,900

Meat
$\frac{3}{2} \times 15000$
= sh.22,500

Tea leaves
1kg = sh 800
x 2
sh 1600

$\frac{750}{1000} \times 1600$
= sh. 1200

Loaves of bread
10,600

Total expenditure
22500
15900
10600
+ 1200
50200

sh 50200
+ sh 9800
shs 60000

05

26 (a) Time from Soroti to Mbale

3 : 50
- 1 : 20
2 : 30

$2\frac{1}{2}$ hours

Distance covered

$= \frac{54km}{h} \times \frac{5h}{2}$

$= 135km$

Distance from Mbale to Jinja

$= \frac{85km}{h} \times 2h$

$= 170km$

$\text{Average speed} = \frac{\text{Total Distance covered}}{\text{Total time taken}}$

$= \frac{170km + 135km}{2\frac{1}{2}h + \frac{1}{2}h + 2h}$

$= \frac{305km}{5h}$

$= 61km/h$ **05**

27

a) $r = \frac{28}{2}$

$r = 14cm$

$\pi r^2 h = \text{volume}$

$\frac{22}{7} \times 14 \times 14 \times h = \left(\frac{308}{10} \times 1000\right)cm^3$

$22 \times 2 \times 14 \times h = 30800cm^3$

$\frac{616cm^2}{616cm^2} = \frac{30800cm^2}{616cm^2}$

$h = 50cm$

b) $\frac{3}{4} \times \frac{308}{10}$

$= \left(\frac{231}{10}\right)L$

$= 23.1L$

M_1 A_1 M_1 A_1 **05** Follow through

28 a) $\text{Average} = \frac{\text{Sum of data}}{\text{Number of data}}$

$\frac{(80x2) + (60xn) + 90 + (70x4)}{2 + n + 1 + 4} = 71$

$\frac{160 + 60n + 90 + 280}{n + 7} = 71$

$(n+7) \times \frac{(60n + 530)}{(n+7)} = 71(n+7)$

$60n + 530 = 71n + 497$

$71 - 60n = 530 - 497$

$\frac{11n}{11} = \frac{33}{11}$

$n = 3$

b) $4 + 3 = 7$ pupils. **05**

29 a) Total ratio

$2 + 3 + 5$

10

$5 - 3 = 2$

Number of people in Kamu

$40 \div \frac{2}{10}$

$\frac{40}{1} \times \frac{10}{2}$

200people.

b) $3 - 2 = 1$

$= \frac{1}{10} \times 200$

$= 20 \text{ more women}$

M_1 A_1 M_1 A_1 M_1 A_1 **05** Follow through

30 a) $\text{Area} = B \times H$

$= 28m \times 17m$

$= 476m^2$

b) $B \times H = B \times H$

$14m \times m = 28m \times 17m$

$\frac{14m \times m}{14m} = \frac{28m \times 17m}{14m}$

$m = 2 \times 17m$

$EF = 34m$

M_1 A_1 M_1 A_1 M_1 A_1 **05** Follow through

31 Let the cost of a book be x.

book	pen	set	Total
x	x - 700	$\frac{4}{3}x$	14300

$x + x - 700 + \frac{4}{3}x = 14300$

$2x + \frac{4x}{3} = 14300 + 700$

$\left(3x + \frac{2x}{1}\right) + \left(\frac{4x \times 3}{3}\right) = (15000 \times 3)$

$6x + 4x = 45000$

$\frac{10x}{10} = \frac{45000}{10}$

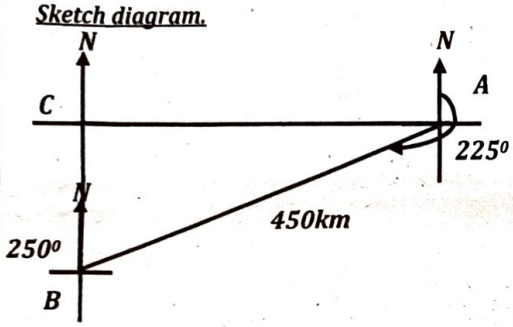
$x = 4500$

2books	3sets
2 x 4500	$\frac{4}{3}$ x 4500 x 3
sh 9000	sh 18000

Total = sh18000 +sh9000
= sh 27000

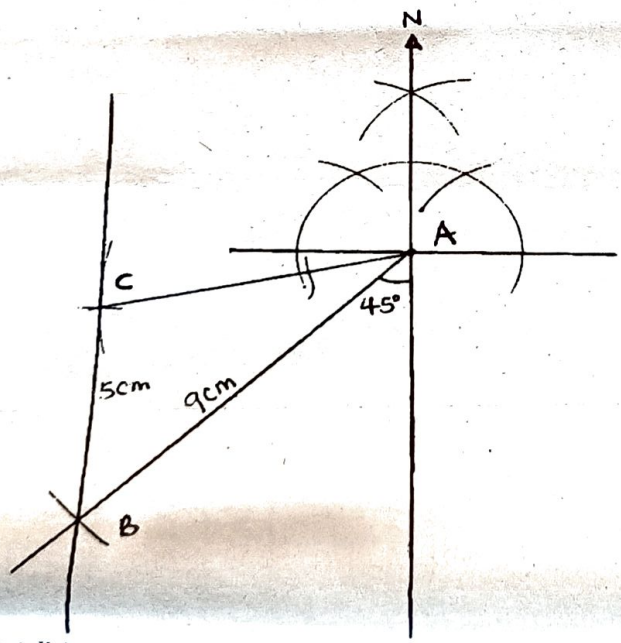
M_1 A_1 M_1 A_1 M_1 A_1 **05** — Follow through

32 Sketch diagram.



Distance in cm

A to B	B to C
$\frac{9}{\cancel{450}\ \cancel{50}}$	$\frac{5}{\cancel{250}\ \cancel{50}}$
9cm	5cm



b) shortest distance
6.5cm
1cm = 50km
$6.5km = \frac{65}{10} \times 50$

$= 325km$

M_1 A_1 M_1 A_1 M_1 A_1 **05** — Follow through