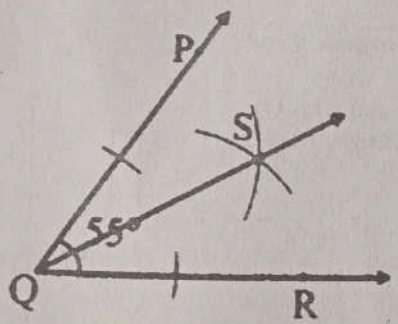
THE PRIME MOCK EXAMINATIONS 2024

P.7 MATHEMATICS MARKING GUIDE

SECTION A (40 MARKS)

NO	SOLUTION	MARKS	COMMENT
1	64 + 24 88	B_2	Follow through
3	$\frac{n(n+1)}{2}$ $\frac{6(6+1)}{2}$ 3 (7) = 21	M_1 A_1	Follow through
5	9.076×10^{-3}	M_1 A_1	Follow through
7			
9	1kg = 1000gm $\frac{256}{1000} \times 1000$gm 256gm	M_1 A_1	Follow through
11	$\frac{26}{9}$ = 2 rem 8 26 = 8 finite 9	M_1 A_1	Follow through
13	$18 \div \frac{2}{3}$ $\frac{9}{18} \times \frac{3}{2_1}$ 9 x 3 = 27	M_1 A_1	Follow through

NO	SOLUTION	MARKS	COMMENT
2	19037= Nineteen thousand thirty Seven.	M_1 A_1	Follow through
4	Y={1,2,4,8} No of subsets = 2^n = 2^4 = 2 x 2 x 2 x 2 = 16	M_1 A_1	Follow through
6	Hrs Mins 11 40 am + 6 50 18 30hrs 90 - 60 30	M_1 A_1	Follow through
8	K= 4, L=3, M=2 KL -M (4 x 3)-2 12-2 10	M_1 A_1	Follow through
10	T | N | D | NBKS 18 | 7 | 5 | 18-2 | | | 6 Prob = $\frac{6}{18}$	M_1 A_1	Follow through
12	2 | 18 | 15 3 | 9 | 15 3 | 3 | 5 5 | 1 | 5 | 1 | 1 2x3x3x5 6x15 120 120+3 122	M_1 A_1	Follow through
14	$\left(\frac{1}{2_1} \times \frac{11}{\cancel{22}_1} \times \frac{5}{\cancel{35}_7}\right) + 35$m 55+35 90m	M_1 A_1	Follow through

15 Sh 55000 + sh 8500
= Sh 63500

Follow through

16
$3x + 41^0 + 64^0 = 180^0$
$3x + 105^0 = 180^0$
$3x = 180^0 - 105^0$
$\frac{3x}{3} = \frac{75^{25}}{3_1}$
$X = 25^0$

Follow through

17

C	G	TR
3	5	8
	600	

$\frac{600^{120}}{5_1} \times 3$
120×3
$=360$

Follow through

18
$3x\ 2\ (2-x) = 16$
$6-2x = 16$
$-2x = 16-6$
$\frac{-2x}{-2} = \frac{10}{-2}$

Follow through

19
$M = \frac{SOi}{NO}$

$7 = \frac{X+2+9+10+4+X}{5}$
$35 = 2X + 25$
$35 - 25 = 2X + 25 - 25$
$\frac{10}{5} = \frac{2X}{2}$
$5 = X$
$\therefore X = 5$

Follow through

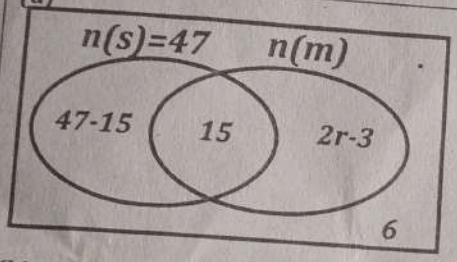
20
$\left(\frac{90}{1000} \div \frac{1}{3600}\right) km/hr$

$\frac{90}{1000} \times \frac{3600}{1}$
9×36
$=324 km/h$

Follow through

SECTION B (60 marks)

21 (a)



(b) $47-15+15+2r-3+6 = 86$
$47+3+2r = 86$
$59+2r = 86$
$2r = 86-50$
$\frac{2r}{2_1} = \frac{36^{18}}{2_1}$
$r = 18$

05

22 (a) 103_{five} to base three

103_{five}
$(2x5^2) + (0x5^1) + (3x5^0)$
$(2x5x5) + (0x5) + (3x1)$
$50 + 0 + 3$
53_{ten}

3	53	2
3	17	2
3	5	2
	1	

1222_{three}

B_1 Follow through
M_1
A_1

(b) $302x = 200_{five}$
$(3 \times x^2) + (0 \times x^1) + (3 \times x^0) = (2x5^2) + (0x5^1) + (0x5^0)$
$3x^2 + 0 + 2 = 50+0+0$
$50+2r = 50$
$3x^2 = 50-2$
$\frac{3x^2}{3_1} = \frac{48^{16}}{3_1}$
$\sqrt{x^2} = \sqrt{16}$
$X = 4$

M_1
A_1
05

23

Sugar	Posho flour	Cooking oil	Blue band
Sh 3800x3 Sh 11400	$\frac{5}{4_1} \times$ sh $\frac{2000^{500}}{5_1}$ Sh 2500	$\frac{500}{1000} \times 7500$ Sh 3750	Sh 6500

(a) T.E
Sh 11400+ sh2500 + sh3750 + sh6500
= Sh 24150

(b) Sh 30000-sh 24150
Sh 5850

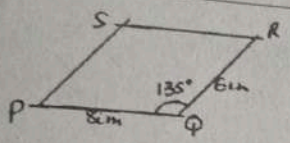
24 (a) M_3 = {3, 6, 9, 12, 15, 18, 21, 24, 27, 30.....)
Sum of digits given
4 + 8 + 9
21
21 + m = 21
m = 21-21
m = 0

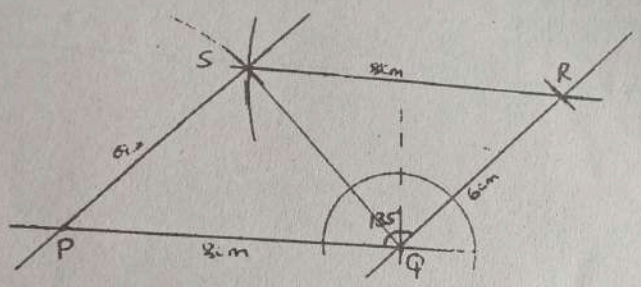
(b)

2	40	50
2	20	25
2	10	25
2	5	25
5	1	5
	1	1

2 x 2 x 2 x 5 x 5
4 x 50
200 mins

25





QS = 5.8cm

26 (a) 3:30pm ⟶ 15:30 hrs

(b) 10: 00
- 04: 00
6 : 00 hrs
$= \frac{6^3}{2_1}$
= 3x 2
= 6 patients

(c) 11: 00
- 05: 00
6 : 00
= 6 hours

B_1	Follow through
M_1	
A_1	
M_1	
A_1	

27 (a) P= 6cm + 8cm
P= 14cm

(b) 2x+13 = 3x+5
13-5 = 3x-2x
8 = x
X = 8
3x = (3x8cm)
= 24cm

(c) A= (LxW) + (LxW)
A= (24cmx8cm) + (14cmx5cm)
A= 192cm² + 70cm²
A = 262 cm²

B_1	Follow through
B_1	
B_1	
M_1	
A_1	

28

Eng	Rem	Mtc	Etm	Others
$\frac{1}{3}$	$\frac{3}{3} - \frac{1}{3}$	$\frac{1}{4} X \frac{2}{3}$	$\frac{1}{3} + \frac{1}{6}$	$\frac{2}{2} - \frac{1}{2}$
		$\frac{1}{\cancel{12}_6}$	$\frac{2+1}{6}$	$\frac{1}{2}$
		$\frac{1}{6}$	$\frac{1_3}{6_2}$	
			$\frac{1}{2}$	

(b) $(210 \div \frac{1}{2})$
210 x 2
= 420 books

29	(a) $180^0 - 53^0$ $= 127^0$ $180^0 - (55^0 + 127^0)$ $180^0 - 152^0$ $= 28^0$ $25^0 + 28^0$ $= 53^0$ (b) $53^0 + 53^0$ 106^0	B_2 M_1 A_1	Follow through
31	(a) D | K m | 25 + m (m+10) | (25+m+10)	M_1	Follow through
	$2(m+10) = 35 + m$ $2m+20 = 35+m$ $2m-m = 35-20$ $m = 15$ (b)	M_1 A_1 A_1	

M+10	25+m+10	Total
15+10	25+15+10	25+50
25	50	75

30	(a) $(4 \times 4) + (2 \times 4) + (2 \times 4)$ $16 + 8 + 8$ $16 + 16$ 32 cubes (b) $(4 \times 4 \times 4)$ 64 cubes $64 - 32$ 32 cubes (c) (16×8) $= 128cm^3$	M_1 A_1 M_1 A_1	Follow through
32	(a) 54+27 81 mangoes (b) 162 – 135 27 mangoes (c) Travis = 108 mangoes $= \frac{\overset{54}{\cancel{108}}}{\underset{1}{\cancel{2}}} \times$ sh 700 = Sh 37800	B_1 A_1 M_1 A_1	Follow through