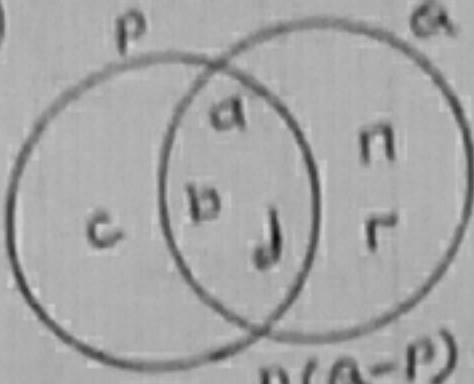


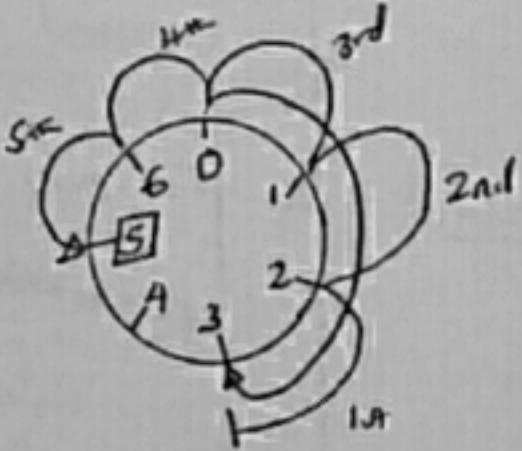
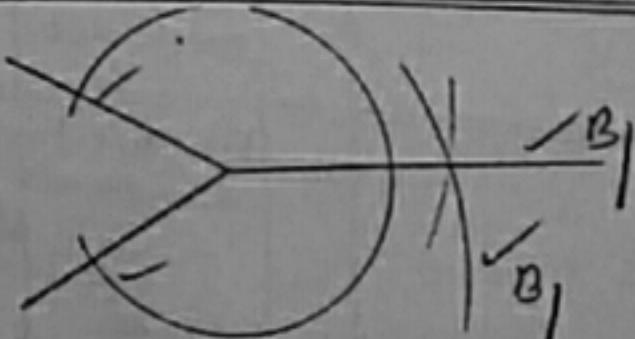
NO	LEVEL	SOLUTION		REASON FOR AWARDED	COMMENTS/ NOTES
1	P-2	$  \begin{array}{r}  759 \\  -434 \\  \hline  325  \end{array}  $ $  \begin{array}{r}  7-4=5 \\  5-3=2 \\  7-4=3  \end{array}  $	B <sub>2</sub>	for 325	Reject where place values are not followed
2	P-4	$  \begin{array}{r}  44000 \\  + 42 \\  \hline  44048  \end{array}  $	B <sub>2</sub>	For correct answer	Reject wrong working Accept without working.
3	P-6	$(2 \times 9 \times 9) - (-b)$ $(2 \times 2 \times 2) - (-3)$ $8 - (-3)$ $8 + 3 = \underline{11}$	M <sub>1</sub>	For correct substitution.	Reject where multiplication of integers is not shown.
			A <sub>1</sub>	For 11	$8 - -3 = 11$ or $8 - -3$ $8 + 3 = 11$
4	P-6	$\frac{4}{12} \div \frac{3}{12}$ $(i) \left( \frac{3}{1} \times \frac{4}{12} \right) \div \left( \frac{3}{1} \times \frac{3}{12} \right)$ $= (3 \times 4) \div (2 \times 3)$ $= 12 \div 6$ $= \frac{12}{6}$ $= \frac{2}{1}$ $= \underline{2}$	M <sub>1</sub>	For multiplication by L.C.M	Reject without the second brackets. Reject $\frac{2}{1}$
			A <sub>1</sub>	for 2	

LEVEL	SOLUTION	MARKS AWARDED	REMARKS FOR CORRECTNESS / NOTES
	(ii) $\frac{4}{3} \times \frac{12}{18}$ $= \frac{2}{1}$ $= 2$	M <sub>1</sub>	for multiplication by reciprocal
	(iii) $\frac{4}{3} \div \frac{12}{18}$ $= \frac{1}{\frac{3}{4}} \times \frac{12}{12} = \frac{1}{1}$ $= \frac{2}{1}$ $= 2$	A <sub>1</sub>	for 2

5	P.T.	<p>(i) <math>57^\circ + 72^\circ + 3r = 180^\circ</math> (Angles on the straight line)  <math>129^\circ + 3r = 180^\circ</math>  <math>129^\circ - 129^\circ + 3r = 180^\circ - 129^\circ</math>  <math>3r = 51^\circ</math>  <math>r = 17^\circ</math></p> <p>(ii) <math>57^\circ + 72^\circ + 3r = 180^\circ</math> (Angles in <math>\triangle</math>)  <math>129^\circ + 3r = 180^\circ</math>  <math>129^\circ - 129^\circ + 3r = 180^\circ - 129^\circ</math>  <math>3r = 51^\circ</math>  <math>r = 17^\circ</math></p>	M <sub>1</sub> A <sub>1</sub>	Accept $r=17^\circ$ Reject work without completion of the diagram. For formulating equation Follow through the various working
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No.	Date	Subject	Answer	Answer	Reason for Awarded	Comments/ Notes
6	F.S	(i)		$n(A-P) = 2$	M <sub>1</sub>	for identification of (A-P) using Venn diagram m
		(ii)	$P = \{a, b, c, d\}$ $Q = \{a, r, p, d, n\}$ $(Q-P) = \{r, n\}$ $= \{r, n\}$ . $n(Q-P) = 2$	A <sub>1</sub>	For $n(Q-P) = 2$ .	Accept $n(A-P) = 2$ elements <u>reject</u> $(G-P) = \{r, n\}$ $(G-P) = \{r, n\}$
7	F.6	(i)	$22.5 \text{ kg} \times 6 = 135.0 \text{ kg}$ <del><math>\frac{135}{0.45} =</math></del> $1 \text{ kg} = 1000 \text{ g}$ $\therefore 450 \text{ g} = \left(\frac{450}{1000}\right) \text{ kg}$ . $N = \text{no of packets} = 135 \div \frac{450}{1000}$ $= 135 \times \frac{1000}{450}$ $= 3 \times 100$ $= \underline{\underline{300 \text{ packets}}}$ .	B <sub>1</sub>	For 135kg	
				D <sub>1</sub>	For 300 or 300 packets	

No.	QUESTION	SOLUTION	MARKS FOR	ANSWER	NOTES
	(ii) $1 \text{ kg} = 1000 \text{ g}$ $22.5 \text{ kg} = (22.5 \times 1000) \text{ g}$ $= 22500 \text{ g}$				Emphasize correct units.
	$\text{No. of packets} = \frac{22500}{450} \times 6$ $= 50 \times 6$ $= 300 \text{ packets.}$	M <sub>1</sub>	For correct method	A <sub>1</sub>	Reject wrong units.
				B <sub>1</sub>	For 300 or 300 packets
	(iii) $1 \text{ kg} = 1000 \text{ g}$ $\therefore 450 \text{ g} = (450 \div 1000) \text{ kg}$ $= \frac{45}{1000} \text{ kg}$ $= 0.45 \text{ kg}$			B <sub>1</sub>	For 0.45 kg
	$\text{No. of packets} = \frac{22.5}{0.45} \times 6$ $= 6 \times \frac{22.5}{10} \div \frac{45}{100}$ $= 6 \times \frac{2.25}{10} \times \frac{100}{45}$ $= 6 \times 5 \times 10$ $= 300 \text{ packets}$	B <sub>1</sub>	For correct method	B <sub>1</sub>	For 300 or 300 packets
8	PG -3, 0, 1, 3, 5, 6		M <sub>1</sub>	For correct arrangement	Reject wrong arrangement
	$\text{median} = \frac{1+3}{2} = \frac{4}{2} = 2$	A <sub>1</sub>	For 2		

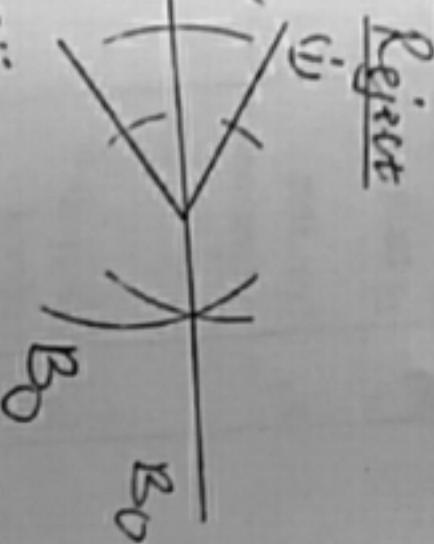
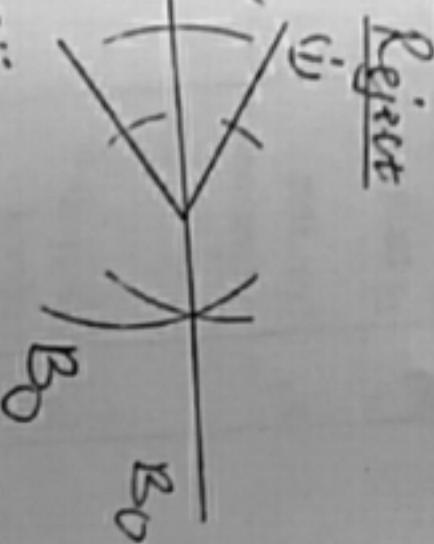
No	LEVEL	SOLUTION	REASON FOR ANSWER		COMMENT NO/CS.
			M <sub>1</sub>	A <sub>1</sub>	
9	P.G	<p>(i) <math>3 - 5 = d</math> (finite 7)</p> $(7+3) - 5 = d$ (finite 7) $10 - 5 = d$ (finite 7) $5 = d$ (finite 7)	M <sub>1</sub> For correct method.	A <sub>1</sub> For correct answer.	Accept <del>B=5</del> $d=5$
	(ii)	 <p><math>3 - 5 = 5</math> (finite 7)</p>	M <sub>1</sub> For correct working using a dial	A <sub>1</sub> For correct answer	follow through
10	P.G	<p>First 4 natural even numbers 2, 4, 6 and 8</p> $2 + 4 + 6 + 8$ $6 + 6 + 8$ $12 + 8$ $= 20$	M <sub>1</sub> For correct method.	A <sub>1</sub> For 20.	
11	P.G	$\begin{array}{r} 17 : 45 \\ - 12 : 00 \\ \hline 5 : 45 \text{ p.m} \end{array}$	M <sub>1</sub> For correct working	A <sub>1</sub> For 5:45pm	Reject 5:15 p.m 5:15 515 pm
12					

solution

Reason No. commetns/  
Answer  
number

Accept

Reject



P.5 (i)  $2 \times 5 \times 5 = 50 \text{ ten}$

$$\begin{array}{r|rr} 5 & 50 & 0 \\ \hline 5 & 10 & 0 \\ 2 & 9 \end{array}$$

$$= \underline{\underline{200 \text{ five}}}$$

B1

for 50 ten

or  
reject  
without base  
five

B1

for 200 five

(ii)  $2 \times 5 \times 5$

$$\begin{array}{r|rr} 5 & 50 & 0 \\ \hline 5 & 10 & 0 \\ 2 & 9 \end{array}$$

$$S = \underline{\underline{10 \text{ five}}}$$

$$= 2 \times 10 \text{ five} \times 10 \text{ five}$$

$$= \underline{\underline{200 \text{ five}}}$$

M1  
For correct  
working  
for 200 five

e

No	level	solution	Award	REASON FOR AWARDED	COMMENT
		(iii) $243_{\text{five}}$ $200_{\text{five}} + 40_{\text{five}} + 3_{\text{five}}$ = <u><math>200_{\text{five}}</math></u> .	M, A,		
14	P-5	i) $M_{12} = \{12, 24, 36, 48, 60, 72, 84, 96, \dots\}$ ii) $M_{15} = \{15, 30, 45, 60, 75, 90, \dots\}$ L.C.M = <u>60</u>	B, B,	For multiples of both. For the correct answer.	Reject where multiples leading to the L.C.M are not all listed.
		ii)			
		$\begin{array}{ c c c } \hline 2 & 12 & 15 \\ \hline 2 & 6 & 15 \\ \hline 3 & 3 & 15 \\ \hline 5 & 1 & 5 \\ \hline & 1 & 1 \\ \hline \end{array}$ $L.C.M = 2 \times 2 \times 3 \times 5$ $L.C.M = 4 \times 15$ $L.C.M = \underline{60}$	B,	For the correct ladder factorization of 12 and 15.	
15	P-7	Girls present = $\frac{1}{3} \times \frac{1}{2}$ = $\frac{1}{6}$  Boys present = $\frac{2}{3} - \frac{1}{6} = \frac{(2 \times 2) - (1 \times 1)}{6}$ = $\frac{4 - 1}{6}$ = <u><math>\frac{3}{6}</math></u>	B, B,	For $\frac{1}{6}$	Follow through.

Solution

$$(ii) \frac{2}{3} - \frac{1}{4} \times \frac{2}{3} = \frac{2}{3} - \frac{1}{6}$$

$$\frac{2}{3} - \frac{1}{6} = \frac{(2 \times 2) - (1 \times 1)}{6}$$

$$= \frac{4 - 1}{6}$$

$$= \frac{3}{6}$$

$$= \underline{\frac{1}{2}}$$

B1 For  $\frac{1}{6}$ B1 For  $\frac{3}{6}$   
or  
 $\frac{1}{2}$ 

$$(iii) \frac{4}{4} - \frac{1}{4} = \frac{3}{4}$$

B1 For  $\frac{3}{4}$ 

Both present

$$1 \frac{1}{3} \times \frac{1}{4} = \frac{3}{6}$$

$$= \underline{\frac{1}{2}}$$

B1 For  $\frac{3}{6} = \frac{1}{2}$ 

Follow through

16 PG Total weight

$$5 \times 50 \text{ kg} = 250 \text{ kg}$$

B1 For 250 kg  
or 250

$$250 \text{ kg} - 75 \text{ kg} = 175 \text{ kg}$$

B1 For 175 kg  
or 175

$$250 \text{ kg} - 75 \text{ kg} = 175 \text{ kg}$$

17 PG 1 hour = 60 min

$$\text{Travel minutes} = \frac{10}{200} \text{ hr} = \frac{1}{2}$$

$$\text{Time} = \frac{1}{2} \text{ h}$$

$$\text{Distance} = \text{speed} \times \text{time}$$

$$D = S \times T$$

$$D = S \times T$$

Reason  
for  
marking

comment

No	level	solution	mark	REASON FOR MARK	comment
		$D = \frac{15 \text{ km}}{\text{h}} \times 1\frac{1}{2} \text{ h}$ $D = 15 \text{ km/h} \times \frac{3}{2} \text{ h}$ $D = 15 \times \frac{3}{2} \text{ h}$ $D = 8 \times 3$ $\underline{D = 24 \text{ KM}}$	M <sub>1</sub>	For correct working	
			A <sub>1</sub>	For correct answer	
18	P.6(i)	$(4q - 6) - (3q - 8)$ $4q - 6 - 3q + 8$ $4q - 3q + 8 - 6$ $= q + 2$	M <sub>1</sub>	For removal of brackets correctly.	
			A <sub>1</sub>	For correct answer	Follow through
	(ii)	$(4q - 6) - (3q - 3)$ $= 4q - 3q - 6 + 8$ $= -6 + 8 + 4q - 3q$ $= \underline{2 + q}$	M <sub>1</sub>	For correct removal of brackets	
			A <sub>1</sub>	For correct answer	
19	P.5	$1^{\text{st}} \text{ person} = \text{sh } 500$ $2^{\text{nd}} \text{ person} = \text{sh } 500 + 200$ $= \underline{\text{sh } 700}$ $\text{Two people} \rightarrow \text{sh } 500 + \text{sh } 700$ $= \text{sh } 1200$ $= \text{sh } 1500 - \text{sh } 1200$ $= \underline{\text{sh } 300}$ $(\text{iii}) -1500 - 500$ $= 1000$ $= 1000 - (\text{sh } 500 + 200)$ $= 1000 - 700 = \underline{300}$	B <sub>1</sub>	For 1200	Follow through
			B <sub>1</sub>	For 300 or sh 300	
			B <sub>1</sub>	For 1000	
			A <sub>1</sub>	For 300	

HC Level	Solution	MARKS FOR ANSWER	COMMENT
P.6	$1m = 100 \text{ cm}$ $45m = 45 \times 100 \text{ cm}$ $= 4500 \text{ cm}$ $\text{No. of strides} = \frac{4500 \text{ cm}}{30 \text{ cm}}$ $= 150 \text{ strides}$	B1	for 4500cm
		B1	for 150 or 150 strides
	$1m = 100 \text{ cm}$ $30 \text{ cm} = \frac{30}{100}$ $= 0.3 \text{ m}$ $\text{strides} = 45 \div 0.3$ $= 45 \div \frac{3}{10}$ $= 45 \times \frac{10}{3}$ $= 15 \times 10$ $= 150 \text{ strides}$	B1	for 0.3m

SECTION B	Marks	Comment
P.7 Q. $30-d+d+2d-4=36$ $30-4+2d = 36$ $26+2d = 36$ $26-26+2d = 36-26$ $2d = \frac{10}{2}$ $d = 5$	M1	for Formation of equation

No	level	solution	mark	REASON FOR AWARDED	comment								
		<p>b) <math>= (2d-4)(2d-2)</math>  <math>= (2 \times 5 - 4)(2 \times 5 - 2)</math>  <math>= (10 - 4)(10 - 2)</math>  <math>= 6 + 8</math>  <math>= \underline{14} \text{ pupils.}</math></p>	M, A <sub>1</sub>	For correct substitution. for 14									
		<p>c) <math>30d + d + 2d - 4 + 2d - 2</math>  i) <math>= 30 - 5 + 5 + 2 \times 5 - 4 + 2 \times 5 - 2</math>  <math>= 25 + 10 + 5 + 10 - 4 - 2</math>  <math>= 50 - 6 =</math>  <math>= \underline{44} \text{ pupils.}</math></p>											
		<p>ii) <math>n(\xi) = (30-d) + d + (2d-4)(2d-2)</math>  <math>= (30-5) + 5 + (2 \times 5 - 4)(2 \times 5 - 2)</math>  <math>= 25 + 5 + 6 + 8</math>  <math>n(\xi) = \underline{44} \text{ pupils.}</math></p>	M <sub>1</sub> A <sub>1</sub>	for correct substitution									
22	P.5	<p>q)</p> <table border="1" style="display: inline-table; vertical-align: middle;"> <tr> <td>TH</td> <td>H</td> <td>T</td> <td>O</td> </tr> <tr> <td>-3</td> <td>4</td> <td>5</td> <td>8</td> </tr> </table> <p><math>\overline{5} \times 10 = 50</math></p> <p><math>\overline{3} \times 1000 = 3000</math></p> <p>Quotient = <math>\frac{3000}{50}</math>  = 60</p>	TH	H	T	O	-3	4	5	8	B <sub>1</sub> B <sub>1</sub> B <sub>1</sub>	for 50 for 3000 for 60	
TH	H	T	O										
-3	4	5	8										
		<p>b) <table border="1" style="display: inline-table; vertical-align: middle;"> <tr> <td>Five FIVES</td> <td>Fives</td> <td>O</td> </tr> <tr> <td>1</td> <td>0</td> <td>3</td> </tr> </table></p>	Five FIVES	Fives	O	1	0	3					
Five FIVES	Fives	O											
1	0	3											

## solution

$$1 \times 5 \times 5 + 0 \times 5 + 3 \times 1$$

$$1 \times 10_{\text{five}} \times 10_{\text{five}} + 0 \times 10_{\text{five}} + 3 \times 1_{\text{five}}$$

$$1 \times 100_{\text{five}} + 0 \times 10_{\text{five}} + 3 \times 1_{\text{five}}$$

ii)  $103_{\text{five}}$

$$= 1 \times \text{Five-fives} + 0 \times \text{Fives} + 3 \times \text{ones}$$

$$= 1 \times \text{Five-fives} + 0 \times \text{Fives} + 3 \times \text{ones.}$$

 $B_2$ 

For correct  
expansion  
only.

 $B_2$ 

For correct  
expansion  
only.

P-7

i) Amount =  $P + I$

$$\text{but } I = PTR$$

$$138000 = \frac{P}{1} + \frac{P}{1} \times \frac{5}{100} \times \frac{3}{1} \checkmark$$

 $M_1$ 

For correct  
substitution

$$138,000 = P + \frac{15P}{100}$$

$$138000 \times 100 = P \times 100 + \frac{15P}{100} \times 100 \checkmark$$

 $M_1$ 

For removal  
of the  
fraction.

$$138000 \times 100 = 100P + 15P$$

$$138000 \times 100 = 115P$$

$$\frac{138,000 \times 100}{115} = \frac{115P}{115}$$

$$\frac{120,000}{115} = P$$

$$P = \text{sh. } 120,000$$

$$\therefore P = \underline{\text{sh. } 120,000} \checkmark$$

 $A_1$ 

For correct  
answer

Follow  
through.

level	solution	ANSWER	REASON FOR ANSWER	comment
10	b) $SI = A - P$ i) $SI = sh \cdot 138,000 - 120,000$ $SI = sh \cdot 18,000$  OR ii) $SI = PTR$ $SI = 120,000 \times 3 \times \frac{5}{100}$  $SI = 12000 \times 15$ <u><math>= sh 18,000</math></u>	M <sub>1</sub> A <sub>1</sub> M <sub>1</sub> A <sub>1</sub>	For correct working for 18000. for correct substitution for sh-18,000	Follow through.
24 PT	i) Area of square $A = s \times s$ $= 14m \times 14m M_1$ <u><math>= 196 m^2 A_1</math></u>  Circle $A = \pi r^2$ $= \frac{22}{7} \times 7m \times 7m M_1$ <u><math>= 154 m^2 A_1</math></u>  shaded $\begin{array}{r} 196 \\ - 154 \\ \hline 42 \end{array} m^2 B_1$	M <sub>1</sub> A <sub>1</sub> M <sub>1</sub> A <sub>1</sub> B <sub>1</sub>	For correct substitution for 196 m <sup>2</sup> for correct substitution for 154 m <sup>2</sup> for 42 m <sup>2</sup>	Reject wrong units.
	ii) shaded part $= (14 \times 14) - \left( \frac{22}{7} \times 7m \times 7m \right)$ $= 196 m^2 - 154 m^2$ <u><math>= 42 m^2 B_1</math></u>			

No level

25

Solution

i) smaller no =  $\frac{32 - 8}{2}$   
 $= \frac{24}{2}$   
 $= \underline{12}$

ii) Bigger =  $\frac{32 + 8}{2}$   
 $= \frac{40}{2}$   
 $= \underline{20}$

smaller =  $32 - 20$   
 $= \underline{12}$

Nos are 12 and 20

iii)

1st	2nd	sum
g	$g+8$	32

$$\begin{aligned} g + g + 8 &= 32 \\ 2g + 8 &= 32 \\ 2g &= 32 - 8 \\ 2g &= 24 \\ g &= \underline{12} \end{aligned}$$

iv)

1st	2nd	sum
$g + 8$	g	32

$$\begin{aligned} g + 8 + g &= 32 \\ g + g + 8 &= 32 \\ 2g + 8 - 8 &= 32 - 8 \\ 2g &= 24 \\ g &= \underline{12} \end{aligned}$$

M1

Reason

For correct working

M1

For 12

M1

For correct working.

A1

For 20

comment

Follow through

M1

For Formation of equation

A1

For 20

M1

For formation of equation

A1

For 12

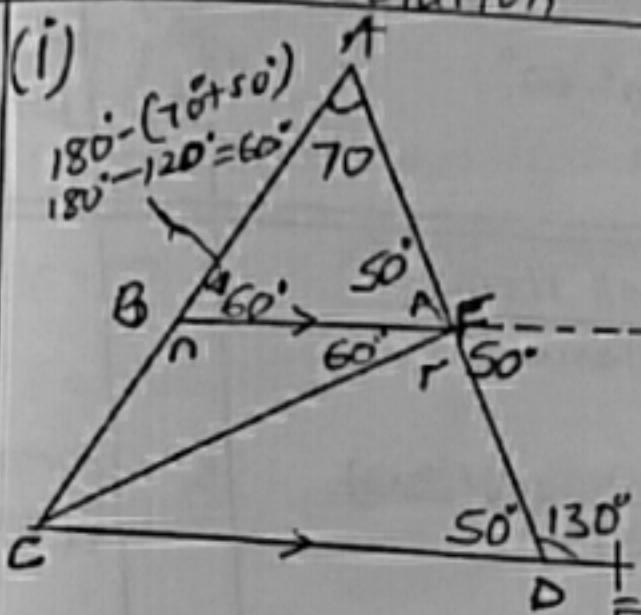
No	level	SOLUTION	marking	ration	comment						
	V)	<table border="1"> <thead> <tr> <th>1<sup>st</sup></th> <th>2nd</th> <th>Total</th> </tr> </thead> <tbody> <tr> <td><math>m</math></td> <td><math>32-m</math></td> <td>32</td> </tr> </tbody> </table> <p> <math>32-m - m = 8</math>  <math>32 - 2m = 8</math>  <math>32 - 32 - 2m = 8 - 32</math>  <math>\frac{1}{2}m = \frac{24}{2}</math>  <math>m = 12</math>  <math>= 32 - m</math>  <math>= 32 - 12</math>  <math>= 20</math> </p>	1 <sup>st</sup>	2nd	Total	$m$	$32-m$	32	M <sub>1</sub>  A <sub>1</sub>	For forming tion of equation.  For 12  correct working	N <sub>2</sub> should be between 0-32 1-31 2-30 3-29 4-28 B <sub>1</sub> 5-27 6-26 7-25 8-24 9-23 10-22 11-21 12-20 B <sub>1</sub> first 11= 12 B <sub>1</sub> second 20 B <sub>1</sub>
1 <sup>st</sup>	2nd	Total									
$m$	$32-m$	32									

26	P.5	<p>q) Beans</p> $  \begin{aligned}  &= 4000 \times 2 \\  &= \text{sh } \underline{\underline{2000}}  \end{aligned}  $ <p>Peas</p> $  \begin{aligned}  A &= \frac{\text{amount}}{\text{unit cost}} \\  &= \frac{\text{sh. } 1400}{\text{sh. } 5600} \\  &= \frac{25}{25} \\  &= \underline{\underline{25 \text{ kg}}}  \end{aligned}  $ <p>Soya beans</p> $  \begin{aligned}  &= 7500 \div \frac{5}{2} \\  &= \frac{1500}{7500} \times \frac{2}{\cancel{5}} \\  &= \underline{\underline{3000}}  \end{aligned}  $	B <sub>1</sub>  B <sub>1</sub>	For correct entry in table.
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QUESTION	LEVEL	TOTAL	SOLUTION	MARKED	REASON	COMMENTS
		Sh. 3000				
		Sh. 1400				
		+ Sh. 7500				
		<u>Sh. 16900</u>		B1	For correct entry of total	
b)				M1	For correct working	
		16900		A1	For 600	
		<u>16300</u>				
		<u>sh. 600</u>				

27	P.1	i)	Fraction of Monday = $\frac{2}{7}$			
			Remaining fraction = $\frac{7}{7} - \frac{2}{7} = \frac{5}{7}$	B1	For $\frac{5}{7}$	Follow.
			Fraction of Wednesday $\frac{2}{3} \times \frac{1}{7} = \frac{2}{21}$	B1	For $\frac{2}{21}$	through
			Fraction of Monday and Wednesday			
			$\frac{2}{7} + \frac{2}{21} = \frac{4}{7}$			
			Fraction of Friday = $\frac{7}{7} - \frac{4}{7}$			
			$= \frac{3}{7}$	B1	For $\frac{3}{7}$	
			Let the salary be K			
			$\frac{3}{7} \times K = 18000 \times \frac{1}{3}$	M1	For formulation of equation	
			$K = 6000 \times 7$			
			$K = \underline{\text{sh. } 42000}$	A1	For sh. 42000	

je	level	solution'	awarded	person	correct
		ii) 2 parts $\rightarrow$ 6h. 18000 1 part $\rightarrow$ 6h. $\frac{18000}{3}$  7 parts $\rightarrow$ 6h. $6000 \times 7$ $=$ 6h. <u>42000</u>		M <sub>1</sub> A <sub>1</sub>	For multiplication For 42000
28	P.7	a) i) $12:15$ $+ 00:00$ <u>12:15 hours</u>		M <sub>1</sub> A <sub>1</sub>	For correct working For 12:15h
		ii) $12:15$ $+ 00:00$ <u>12:15 hours</u>		M <sub>1</sub> A <sub>1</sub>	For correct working For 12:15h
		iii) 12:15 pm $\rightarrow$ 12 15 hours.	B <sub>2</sub>		Reject 12:15h ii) 12:15
	b,	$12:15$ $- 08:45$ <u>03 30 hours</u>  3 hours 30 min  $3\frac{1}{2} = 3\frac{1}{2}$ hrs		B <sub>1</sub>	12:15 iii) 12:15 Reject wrong units.
		Distance = Speed $\times$ Time $D = 60 \text{ km/h} \times 3\frac{1}{2}$ $D = \frac{30}{60} \text{ km/h} \times \frac{7}{4}$ $D = 30 \times 7$ $D = 210 \text{ km}$		M <sub>1</sub> A <sub>1</sub>	For 3 $\frac{1}{2}$ h or 3 $\frac{1}{2}$ h or 3h and 30 mins. For correct working. For 210km

No	level	Solution	AWARDED	REASON	COMMENTS
29	P.7	(i)			
					
		i) $60^\circ + r = 130^\circ$ (Alternate angles) M <sub>1</sub>		Formation of equation	
		$60^\circ - 60^\circ + r = 130^\circ - 60^\circ$	A <sub>1</sub>	for $r = 70^\circ$ or $70$	Follow through
		$r = 70^\circ$			
		ii) $60^\circ + r + 50^\circ = 180^\circ$ (Co-interior Angles) M <sub>1</sub>		Formation of equation	
		$60^\circ + 50^\circ + r = 180^\circ$			
		$110^\circ + r = 180^\circ$			
		$110^\circ - 110^\circ + r = 180^\circ - 110^\circ$			
		$r = 70^\circ$	A <sub>1</sub>	for $70^\circ$	
		iii) $60^\circ + r + 50^\circ = 180^\circ$ (Angles on the straight line) M <sub>1</sub>		Formation of equation	
		$60^\circ + 50^\circ + r = 180^\circ$			
		$110^\circ - 110^\circ + r = 180^\circ - 110^\circ$	A <sub>1</sub>	for $70^\circ$	
		$r = 70^\circ$			
29		(ii) $70^\circ + 50^\circ = n$	M <sub>1</sub>	Formation of equation	
		$120^\circ = n$	A <sub>1</sub>	for $120^\circ$	

level	solution	ANSWER	REASON	com
b, n + 60° = 180°	$n + 60^\circ - 60^\circ = 180^\circ - 60^\circ$ $n = 120^\circ$	M <sub>1</sub>	Formation of equation.	

30 P.T	Mean = $\frac{\text{sum of all items}}{\text{No. of items}}$	A <sub>1</sub>		
	$55 = \frac{(40 \times 3) + (r \times 6) + (50 \times 3) + (70 \times 3)}{3 + 6 + 3 + 3}$	B <sub>1</sub>	Formation of equation	
	$55 = \frac{120 + 6r + 150 + 210}{15}$			
	$\frac{15 \times 6r + 510}{15} = 55 \times 15$	M <sub>1</sub>	Removal of fraction	
	$15 \times 6r + 510 = 825 - 510$	M <sub>1</sub>	Final correction of like terms.	
	$\frac{6r}{6} = \frac{315}{6}$			
	$r = 52\frac{3}{6}$	A <sub>1</sub>	for $52\frac{3}{6}$ or $52\frac{1}{2}$ or $52.5$	

1	$C = 2\pi r^2$			
	$28 = 2 \times \frac{22}{7} \times r$	M <sub>1</sub>	Formation of equation	
	$\frac{44}{7} r = 28$			
	$\frac{7}{44} \times 44 r = 38 \times 7$			
	$\frac{7r}{44} = \frac{38 \times 7}{44}$			
	$r = 14 \text{ cm.}$	A <sub>1</sub>	for $r = 14 \text{ cm.}$ or $D = 28 \text{ cm.}$	

## Solution

$$V = \pi r^2 h$$

$$V = \frac{22}{7} \times 14\text{cm} \times 14\text{cm} \times 100\text{cm}$$

$$V = 22 \times 2\text{cm} \times 14\text{cm} \times 100\text{cm}$$

$$V = 61600\text{ cm}^3$$

I b) capacity =  $\frac{V}{1000\text{ cm}^3}$

$$\text{No. of litres} = \frac{61600\text{ cm}^3}{1000\text{ cm}^3}$$

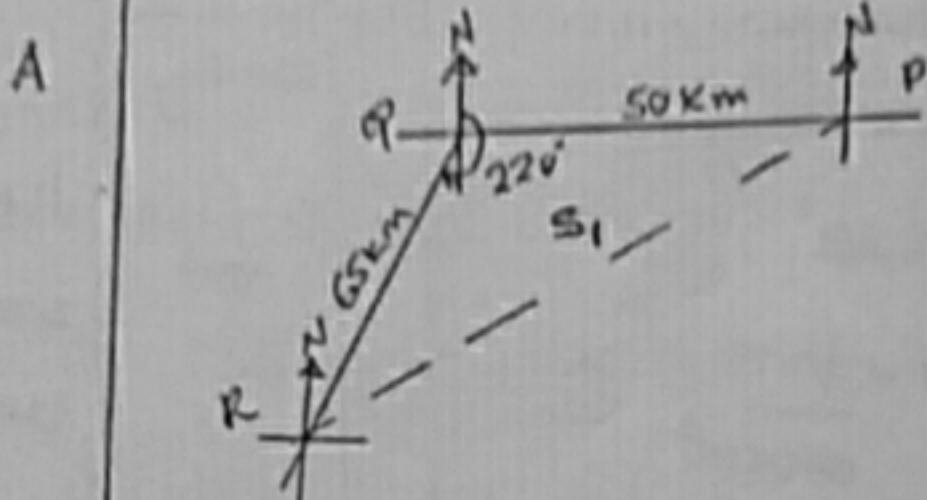
$$= 61.6 \text{ litres.}$$

M<sub>1</sub>

For correct working

A<sub>1</sub>for 61600  
cm<sup>3</sup>B<sub>1</sub>for 61.6  
litres.Reject  
wrong  
units.

32

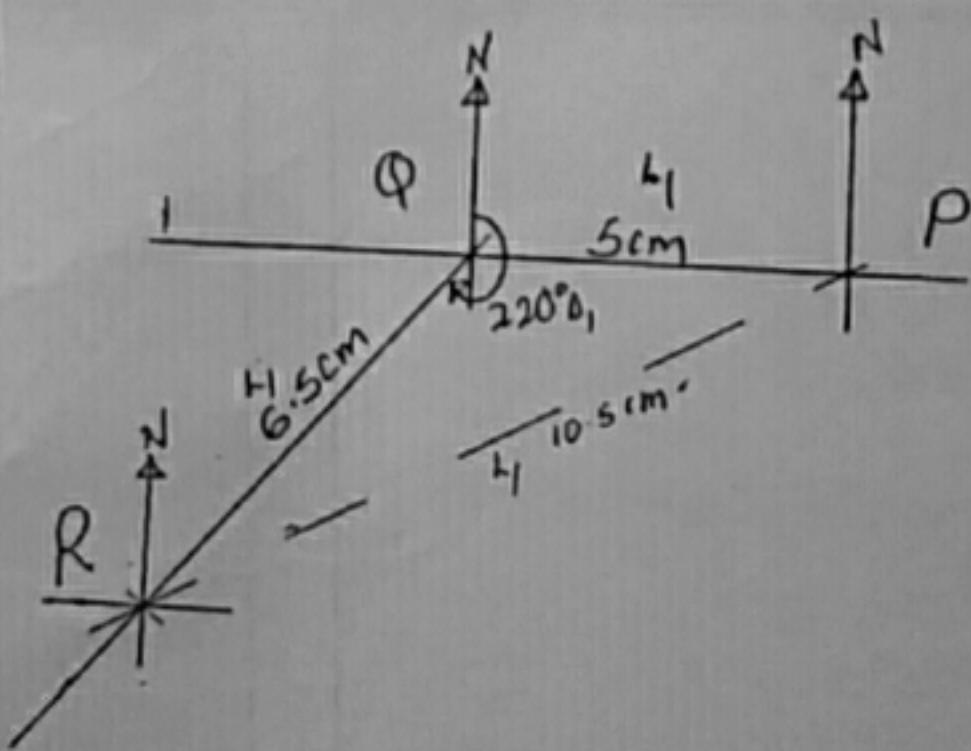
q sketch drawing

$$PR = \frac{50 \text{ km}}{10 \text{ mm}}$$

= 5 cm.

$$QR = \frac{65 \text{ km}}{10 \text{ km}}$$

= 6.5 cm.



b The shortest distance between P and R km

10.5 cm

$$10.5 \times 10 = 105 \text{ km. } B_1$$