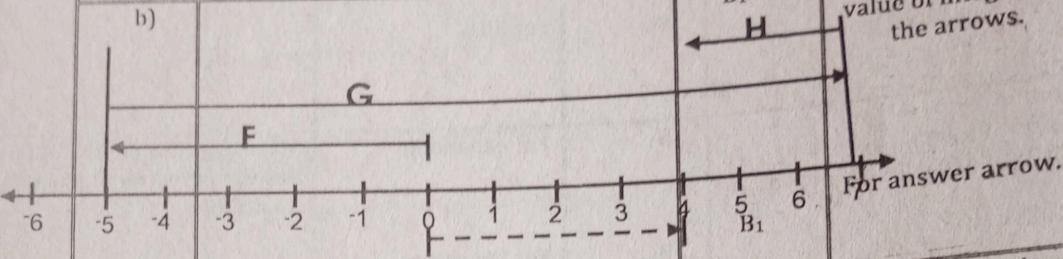


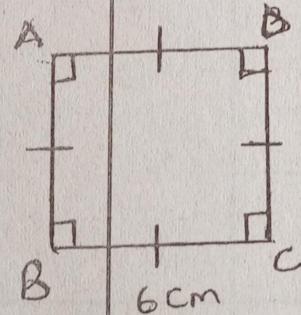
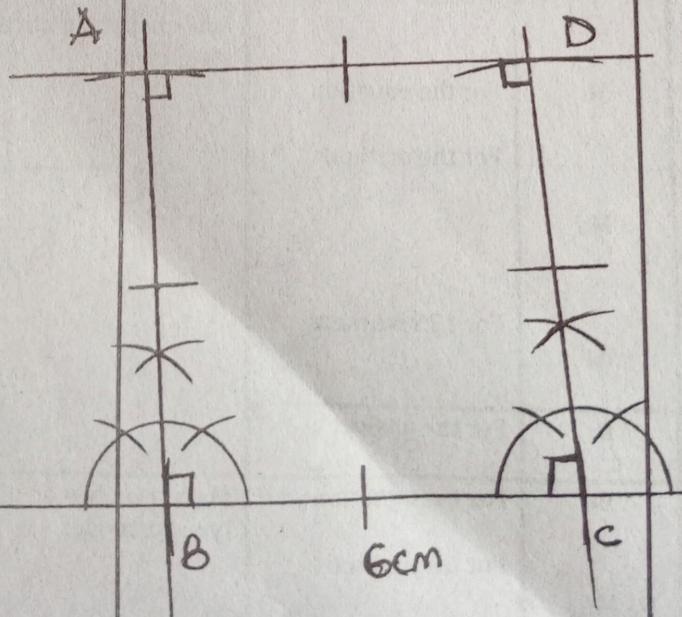
THE SIPRO PRIMARY SEVEN END OF TERM I MATHEMATICS MARKING

NO	LEVEL	SOLUTION	AWARD	REASON
1.	P.2	$\begin{array}{r} 1 \ 2 \\ \times \ 4 \\ \hline 4 \ 8 \end{array}$	B <sub>2</sub>	For the product -Rec -Teac
2.	P.6	$\begin{aligned} 94 &= 90 + 4 \\ &= XC \text{ IV} \\ &= XCIV \end{aligned}$	B <sub>2</sub>	For the answer -Reje = XC = XC
3.	P.5	$\begin{aligned} P &= \{a, b, c, d, e\} \\ Q &= \{a, c, i, o, u\} \\ P \cap Q &= \{a, c\} \\ P \cup Q &= \{a, b, c, d, e, i, u\} \\ n(P \cup Q) &= 7 \end{aligned}$	B <sub>1</sub> B <sub>1</sub>	For $P \cap Q$ For $n(P \cup Q)$ Acc diag
4.	P.5	$\begin{aligned} \frac{11}{12} - \frac{2}{3} &= \frac{(11 \times 1) - (2 \times 4)}{12} \\ &= \frac{11 - 8}{12} \\ &= \frac{3}{12} \\ &= \frac{1}{4} \end{aligned}$	M <sub>1</sub> A <sub>1</sub>	For the method For $\frac{1}{4}$ Acc eq dr
5.	P.5	$\begin{aligned} Y + 100^\circ &= 180^\circ \\ Y + 100^\circ - 100^\circ &= 180^\circ - 100^\circ \\ Y &= 80^\circ \end{aligned}$	B <sub>1</sub> B <sub>1</sub>	For the equation For $80^\circ$ E a
6.	P.6	$\begin{aligned} 8 \text{ pens cost sh.} 10,400 \\ 1 \text{ pen costs sh.} 10,400 \\ \frac{500}{12} \\ \text{Sh.} 1,300 \\ \underline{\text{Sh.} 15,000} \\ \underline{\text{Sh.} 13,000} \\ = 12 \text{ pens} \end{aligned}$	M <sub>1</sub> A <sub>1</sub>	For the method For 12 pens
7.	P.6	$\begin{array}{l} 3, 4, 2, 2, 3, 4, 2 \\ \begin{array}{ c c c c } \hline \text{score} & 3 & 4 & 2 \\ \hline \text{frequency} & 2 & 2 & 3 \\ \hline \end{array} \end{array}$ <p>The modal score is 2</p>	B <sub>1</sub> B <sub>1</sub>	For the table For 2
8.	P.5	$\begin{array}{ c c c } \hline X2^2 & X2^1 & X2^0 \\ \hline 1 & 0 & 1 \\ \hline \end{array}$ $\begin{aligned} (1 \times 2^2) + (0 \times 2^1) + (1 \times 2^0) \\ (1 \times 2 \times 2) + (0 \times 2) + (1 \times 1) \\ 4 + 0 + 1 \\ 5_{\text{ten}} \end{aligned}$	B <sub>1</sub> B <sub>1</sub>	For expansion For $5_{\text{ten}}$
9.	P.4	$\begin{aligned} 1 \text{ hour} &= 60 \text{ minutes} \\ 2 \frac{1}{2} \text{ hours} &= \frac{5}{2} \times 60 \text{ minutes} \\ &= 150 \text{ minutes} \end{aligned}$	M <sub>1</sub> A <sub>1</sub>	For the method For the answer
10.	P.4	$\begin{aligned} Y + 9 \text{ cm} + 7 \text{ cm} + 9 \text{ cm} &= 45 \text{ cm} \\ Y + 25 \text{ cm} - 25 \text{ cm} &= 45 \text{ cm} - 25 \text{ cm} \\ Y &= 20 \text{ cm} \end{aligned}$	B <sub>1</sub> B <sub>1</sub>	For the equation for the answer

			B2	For the angle	-Revisit drawing and constructing of angles. -Guide them to bisect a
211.9	6 P.4				
12.	P.6	$x < +1$ <p><math>S.S = \{-1, 1, -1, 0\}</math></p>	B1 B1	For the number line. For the solution set.	Accept: $S.S = \{+1, 0, -1, \dots\}$
13.	P.6	$  \begin{array}{ c c c } \hline & 3 & 9 & 3 \\ \hline 3 & & 3 & 1 \\ \hline & 1 & & 1 \\ \hline \end{array}  $ $  \begin{aligned}  & 2 \times 3 \times 3 \\  & = 18 + 4 \\  & = 22 \text{ mangoes}  \end{aligned}  $	M1 A1	For the method For the answer	Accept if one has used multiples.
14.	P.5	$40,050$ $40,000 + 50$ Forty thousand fifty.	B1 B1	For expanding For the answer	Emphasise the spelling the punctuation.
15.	P.6	$+8 - +5$ $+8 - (+5)$ $+8 - 5$ $+3$	M1 A1	For the method For the answer	Emphasise the multi rulers.
16.	P.5	$9b - 2b = 7b$	B2	For the answer	Guide the learners to rearrange like terms
17.	P.7	$  \begin{array}{r}  21 - 0 \\  100 - 1 \\  \hline  = 21 - 7 \\  \hline  99 - 33 \\  \hline  = 7 \\  33  \end{array}  $	M1 A1	For the method For the answer	Accept any other method leading to correct answer
18.	P.4	$8 \div 8 = 1$ $8 \div 1 = 8$ $8 \div 2 = 4$ $8 \div 4 = 2$ $F_8 = \{1, 2, 4, 8\}$	M1 B1	For the method For the answer	Accept correct answers
19.	P.4	$  \begin{aligned}  \text{Area} &= \frac{1}{2} \times \text{base} \times \text{height} \\  &= \frac{1}{2} \times 12 \text{m} \times 9 \text{m} \\  &= 6 \text{m} \times 9 \text{m} \\  &= 54 \text{m}^2  \end{aligned}  $	M1 A1	For the method For the answer	Emphasise correct area and volume.
20.	P.5	$  \begin{array}{r}  \text{Hours} \quad \text{mins} \\  12 : 00 \\  -9 \quad 30 \\  \hline  2 : 30  \end{array}  $ $  \begin{array}{r}  \text{Hours} \quad \text{mins} \\  12 : 00 \\  +2 \quad 30 \\  \hline  15 : 30  \end{array}  $			Accept if one has used a clock face.  Accept 180 minutes

		$  \begin{array}{r}  15 : 00 \\  -12 : 00 \\  \hline  3 : 00  \end{array}  $ <p>He took 3 hours</p>	M <sub>1</sub> A <sub>1</sub>	For the method For the answer							
		<b>SECTION B</b>									
21.	P.5 a)	<table border="1" style="display: inline-table; vertical-align: middle;"> <tr> <th>X5<sup>2</sup></th><th>X5<sup>1</sup></th><th>X5<sup>0</sup></th></tr> <tr> <td>2</td><td>0</td><td>0</td></tr> </table> <p style="margin-left: 20px;">five  <math>(2 \times 5^2) + (0 \times 5^1) + (0 \times 5^0)</math>  <math>(2 \times 5 \times 5^0) + (0 \times 5) + (0 \times 1)</math>  <math>50 + 0 + 0</math>  <math>= 50_{10}</math></p>	X5 <sup>2</sup>	X5 <sup>1</sup>	X5 <sup>0</sup>	2	0	0	B <sub>1</sub> B <sub>1</sub>	For the expansion For $50_{10}$	Make a review on bases and regroup applicable.
X5 <sup>2</sup>	X5 <sup>1</sup>	X5 <sup>0</sup>									
2	0	0									
	b)	$20_x = 1010_{\text{two}}$ $(2x x^1) + (0 x x^0) = 1 x 2^3 + (0 x 2^2) + (2 x x)$ $+ (0 x 1) = (1x2x2x2) + (0 x 2 x 2) + (1x2) +$ $(0 x 1)$ $2x + 0 = 8 + 0 + 2 + 0$ $\underline{2x} = \underline{10}$ $2 \quad 2$ $X = 5$ <p>The value of x is base five</p>	B <sub>1</sub> B <sub>1</sub> B <sub>1</sub>	For expanding For the values For $x = 5$	Make a review on bases and regroup applicable.						
22.	P.6 a)	$n(\epsilon) = 31$  $n(c) = k$ $n(c) = 15$ $K - 7$ $7$ $8$ $6$ $= 15 - 7$ $= 8$	B <sub>1</sub> B <sub>1</sub>	For each correct gap filled.	Expose learners to related questions using different approaches.						
	b)	$K - 7 + 7 + 8 + 6 = 31$ $K + 8 + 6 = 31$ $K + 14 - 14 = 31 - 14$ $K = 17$ <p>The value of K is 17.</p>	B <sub>1</sub> B <sub>1</sub>	For the equation For 17							
	c)	$(K-7) + 8$ $(17 - 7) + 8$ $10 + 8$ $18 \text{ farmers}$	B <sub>1</sub> B <sub>1</sub>	For correct substitution For the answer							
23.	P.6 a)	<p>60% are females  Males = <math>100\% - 60\%</math>  <math>= 40\%</math>  Let the total number be n.  40% of n = 50  <math>\frac{40}{100} n = 50</math>  <math>100 \cancel{\times} 40n = 50 \times 150</math>  <math>100 \cancel{\times} 1</math>  <math>\frac{40n}{100} = \frac{50 \times 25}{100}</math>  <math>\frac{40n}{100} = \frac{50 \times 25}{100}</math>  <math>n = 5 \times 25</math>  <math>n = 125 \text{ workers}</math></p>	B <sub>1</sub> M <sub>1</sub> A <sub>1</sub>	For the equation For the method For 125 workers	Make enough statements						
	b)	$60\% - 40\% = 20\%$	B <sub>2</sub>	For the answer							
24.	P.5 a)	$2y + 2y + 20^\circ + 60^\circ = 180^\circ$ $4y + 80^\circ - 80^\circ = 180^\circ - 80^\circ$ $4y = 100^\circ$ $\frac{4y}{4} = \frac{100^\circ}{4}$ $y = 25^\circ$	B <sub>1</sub> M <sub>1</sub>	For the equation For the method	Make a review of types of angles						

		$Y = 25^{\circ}$ The value of $y$ is $25^{\circ}$ .	A <sub>1</sub>	For $25^{\circ}$
b)		$2y = 2 \times 25^{\circ}$ $= 2 \times 25^{\circ}$ $= 50^{\circ}$	B <sub>1</sub>	For the method
25.	P.5 a)	$H = -3$ $F = -5$ $G = +12$	B <sub>1</sub>	For the answer
b)			B <sub>1</sub>	For each correct value of integers by the arrows.

26.	P.5 a)	$\text{Speed} = \frac{D}{T}$ $= \frac{180\text{km}}{3\text{hours}}$ $= 60 \text{ kilometers per hour}$	M <sub>1</sub>	For the method
b)		$\text{Time} = \frac{D}{S}$ $= \frac{120\text{km}}{60\text{km/h}}$ $= 2\text{hours}$	8:00am 2:00 10:00am He covered his journey at 10:00am	B <sub>1</sub> B <sub>1</sub> B <sub>1</sub> B <sub>1</sub>
27.	P.4	 $6\text{cm}$	S <sub>1</sub>	For the sketch
			L <sub>1</sub> C <sub>1</sub> S <sub>1</sub>	For 6cm For right angles For joining

28.	P.5 a)	$\begin{aligned} ab + bc \\ (axb) + (bxc) \\ (2 \times 3) + (3 \times 5) \\ 6 + 15 \\ 21 \end{aligned}$	B <sub>1</sub> B <sub>1</sub> B <sub>1</sub>	For expanding For substituting For the answer	Revisit solving equations more on substitution									
	b)	$\begin{aligned} 3x - 3 = 33 \\ 3x - 3 + 3 = 33 + 3 \\ 12 \\ 3x = 36 \\ 3 \\ X = 12 \end{aligned}$	M <sub>1</sub>  A <sub>1</sub>	For the method For the answer										
29.	P.6 a)	$\begin{aligned} L \times W = \text{area} \\ L \times 30\text{cm} = 2100\text{cm}^2 \\ 30\text{cm} = 2100\text{cm}^2 \\ 30\text{cm} = 70\text{cm} \\ L = 70\text{cm} \\ \therefore \text{height } 70\text{cm} \end{aligned}$	M <sub>1</sub>  A <sub>1</sub>	For the method For the answer	Encourage learners to make proper interim calculations before answering question.									
	b)	$\begin{aligned} L \times W = 3500\text{cm}^2 \\ L \times 70\text{cm} = 3500\text{cm}^2 \\ 70\text{cm}L = 3500\text{cm}^2 \\ 70\text{cm} \quad 70\text{cm} \\ L = 50\text{cm} \\ \text{Area } ABCD \\ \therefore = L \times W \\ = 50\text{cm} \times 30\text{cm} \\ = 1500\text{cm}^2 \end{aligned}$	B <sub>1</sub>  B <sub>1</sub>	For 50cm For 1500cm <sup>2</sup>										
	c)	$\begin{aligned} \text{Capacity} = \frac{\text{volume}}{1000\text{cm}^3} \\ \underline{\text{Base area} \times \text{height}} \\ 1000\text{cm}^3 \\ L \times W \times h \\ 1000\text{cm}^3 \\ (50 \times 30 \times 70) \\ 1000 \\ (50 \times 30 \times 70) \text{ litres} \\ 1000 \\ (5 \times 3 \times 7) \text{ litres} \\ (15 \times 7) \text{ litres} \\ 105 \text{ litres} \end{aligned}$	M <sub>1</sub>  A <sub>1</sub>	For the method For the answer	Make a review of area and volume									
30.	P.5 a)	<table border="1" style="display: inline-table; vertical-align: middle;"> <tr> <td>3</td><td>9</td><td>12</td></tr> <tr> <td colspan="2" style="text-align: center;">—</td><td></td></tr> <tr> <td></td><td>3</td><td>4</td></tr> </table> <p>G.C.F = 3</p>	3	9	12	—				3	4	M <sub>1</sub>  A <sub>1</sub>	For the method For the answer	Revisit types
3	9	12												
—														
	3	4												
b)	$\begin{aligned} &\text{2nd} \quad \text{4th} \\ &2, \textcircled{3}, 5, \textcircled{7}, 11, 13 \\ &3 + 7 = 10 \end{aligned}$	B <sub>1</sub>  B <sub>1</sub>	For listing the prime numbers For the answer											
31.	P.6	<p>Dollars</p> $\begin{aligned} 1 \text{ us } \$ &= \text{Ug sh. } 3600 \\ 400 \text{ } \$ &= \text{ug sh. } 3600 \times 400 \\ &2 \\ \text{Ug sh. } 360000 & \\ \underline{x \quad 4} & \\ \text{Ug sh. } 1,440,000 & \end{aligned}$ <p>Pound Sterling</p> $\begin{aligned} 1 \text{ } \text{£} &= \text{Ug sh. } 4000 \\ 300 \text{ } \text{£} &= \text{Ug sh. } 4000 \times 300 \\ \text{Ug sh. } 40000 & \\ \underline{x \quad 3} & \\ \text{Ug sh. } 1,200,000 & \end{aligned}$	B <sub>1</sub>  B <sub>1</sub>	For each correct product correct currency obtained in Uganda shillings.	Make a review of exchange rate without exchange rate									

		Kenya shillings 1k.sh = Ugsh 40 2000k.sh = ug. sh2,000 x 40		
		Ug sh. 20,000 x 4 <u>Ug.sh 80,000</u>	B1	For the sum
		Ug.sh. 1,440,000 Ug.sh. 1, 200,000 + Ug sh. 90,000 <u>Ug sh. 2,720,000</u>	B1	
32.	P.6	$x + 140^0 + 120^0 = 360^0$ $x + 260^0 + 120^0 = 360^0 - 260^0$ $x = 100^0$ 1 <sup>st</sup> term $\frac{140^0}{300^0} \times \text{sh } 1,440,00$ $\underline{36}$ 18 (80,000 x 7) shillings <u>Sh.560,000</u> 2 <sup>nd</sup> term $\frac{100^0}{360^0} \times \text{sh.} 1,440,000$ $\underline{36}$ 10 x 40,000 = <u>sh.400,000</u> 3 <sup>rd</sup> term 1 $\frac{120^0}{360^0} \times \text{sh } 1,440,000$ $\underline{36}$ 1 x sh 1,440,000 3 <u>Sh.480,000</u>	B1	For x = 100 <sup>0</sup> M a For sh.560,000 For sh.400,000 For sh.480,000