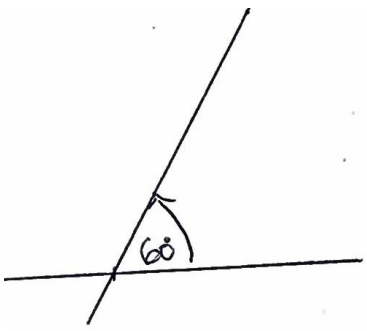
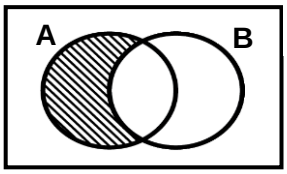
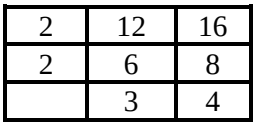
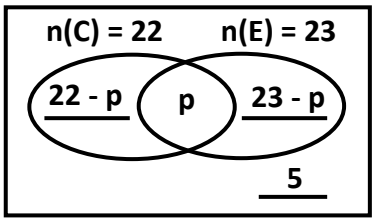
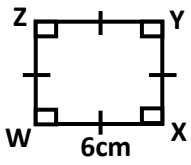
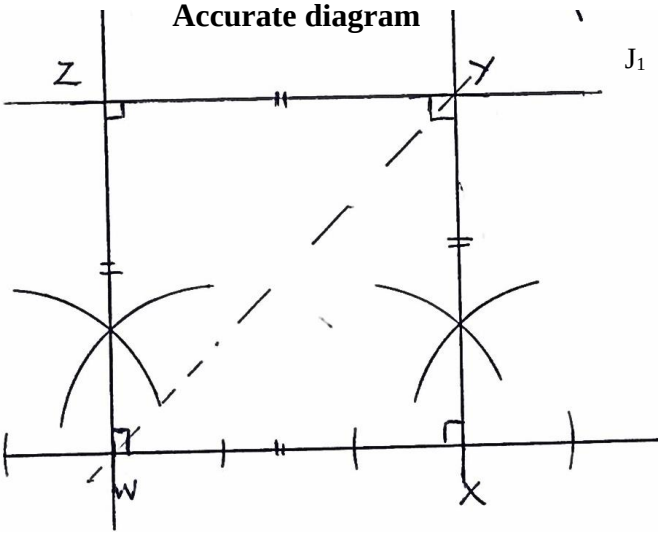
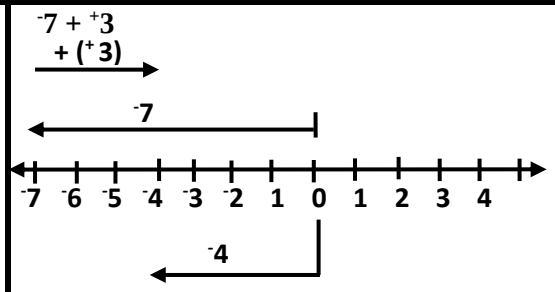
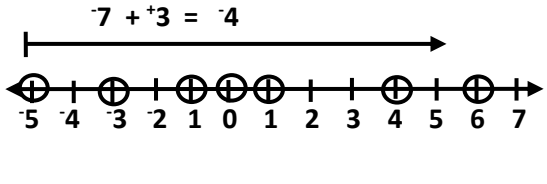
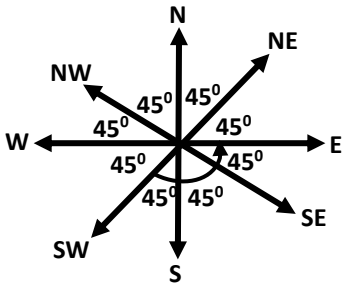
No	Level	Solution	MKS	Reason	Technical advice
1.	P.1	2 2 + 4 2 6	B_2	For correct answer	Put emphasis on place values
2.	P.4	45 = 40 + 5 = XL V = XIV	B_2	For correct answer	Make a review on conversion of Hindu Arabic to Roman numerals.
3.	P.6	$\varnothing$, { cup } , { sugar } , { milk } { cup , sugar } , { cup , milk } { sugar , milk} , {cup , milk , sugar }	B_2	For correct subsets listed	Make a review on finding number of subsets.
4.	P.3	$\frac{3}{6}$	B_2	For correct answer	Accept $\frac{3^1}{6_2}$ $\frac{1}{2}$
5.	P.5	4, 6, 8, 9, 10 , 12 Composite numbers	B_2	For correct answer	Put emphasis on types of numbers.
6.	P.5	$^{-}3 + 5$ = $^{+}5 + ^{-}3$ $^{+}2$ $^{+}2$	B_2	For correct answer	Guide learners to simplify before indicating the sign.
7.	P.4	5 + 5 + 5 + 5 + 2 = 22	B_2	For correct answer	Help learners to know the difference between tallies and bundles.
8.	P.5	4:40 a.m.	B_2	For correct answer	Teach practically
9.	P.5	Perimeter = $S_1 + S_2 + S_3$ = 5m + 2.5m + 2.5m = 5m + 5m = 10m	M_2 A_1	For correct method For correct answer	Put emphasis on units.
10	P.3	3 cups + 2 cups + 4 cups = 9cups	B_2	For correct answer	Put emphasis on addition of like terms.
11	P.4		C_2	For correct construction	Put emphasis on neatness and accuracy.
12	P.4	Gain = Selling price – Cost price = sh 300000 - sh 250000 **sh 50000**	M_1 D_1	For the method For the answer	Help the learners to know other words used instead of profit.
13	P.5	9 7 5 4 TH H T O 9 7 5 4 (9x1000)+(7 x 100)+(5x10)+(4x1) 9000 + 700 + 50 + 4	B_1 B_1	For the right number formed For correct answer	Put emphasis on place values

14	P.5	$\frac{2}{3} + \frac{1}{5} = \frac{(\cancel{15}^{5} \times 2) + (15 \times 1)}{\cancel{3}^{1}\ \ 5}$ $= \frac{10 + 3}{15}$ $= \frac{13}{15}$	M_1 A_1	For the correct method For correct answer	Make a review of related questions.
15.	P.4	1m = 100cm 27.8m = 27.8 x 100cm = $\frac{278}{10}$ x $\cancel{100}$cm = **2780 cm**	M_1 A_1	For correct method For correct answer	Put emphasis on conversion of metric units.
16.	P.5	$2a + 7 = 15$ $2a + 7 - 7 = 15 - 7$ $2a = 8$ $\frac{\cancel{2}a}{\cancel{2}} = \frac{\cancel{8}^{4}}{\cancel{2}_{1}}$ **$a = 4$**	M_1 A_1	For collection of like terms. For correct answer	Guide learners in collection of like terms.
17	P.6	$2a + a + 90^0 = 180^0$ $3a + 90^0 = 180^0$ $3a + 90^0 - 90^0 = 180^0 - 90^0$ $\frac{\cancel{3}a}{\cancel{3}} = \frac{\cancel{90}^{30}}{\cancel{3}_{1}}$ **$a = 30^0$**	M_1 A_1	For correct method For correct answer	Put more emphasis on types of angles.
18	P.6		B_2	For correct answer	Put emphasis on region of sets.
19	P.5	 G.C.F 2 x 2) = 4	M_1 A_1	For correct method For correct answer	Accept any other method.
20	P.4	$\frac{\cancel{30}}{\cancel{6}}$ = 5 pictos 	B_1 B_1	For correct operation used. For correct pictos drawn	Put emphasis on scale.
21	P.6		B_1 B_1 B_1	For correct entry For correct entry For correct entry	Put emphasis on reading and identification of correct regions of sets.

		$22 - p + p + 23 - p + 5 = 40$ $22 + 23 + 5 - p = 40$ $50 - p = 40 - 50$ $-p = -10$ $-1 \quad -1$ $P = 10$ **10 people**	M_1 A_1	For correct method For correct answer	
22 a)	P.5	TTH TH H T O 7 8 4 6 2 6 x 10 = 60 8 x 1000 = 8000 8000 + 60 **8060**	B_1 A_1	For correct value of; (i) 6 (ii) 8 For correct sum	-Put emphasis on place values
b)		2 7 6 2 1 2 7 0 0 0 + 1 0 0 0 **2 8 0 0 0**	M_1 A_1	For correct method For correct answer	
23	P.5	$2a - 6 = 14$ $2a - 6 + 6 = 4 + 6$ $2a = 10$ $\frac{2a}{2} = \frac{10}{2}$ **a = 5**	M_1 A_1	For collecting like terms For correct answer	Expose candidates to a variety of equations with different approaches.
		Let the number be b $2(b + 5) = 20$ $2 \times b + 5 \times 2 = 20$ $2b + 10 = 20$ $2b + 10 - 10 = 20 - 10$ $2b = 10$ $\frac{2b}{2} = \frac{10}{2}$ (5, 1) **b = 5**	M_1 A_1	For correct formation of the equation. For correct answer	
24 a)	P.5	Sketch  **Accurate diagram**  	S_1 L_1 C_1 J_1	For sketch For 6cm For right angles. For joining	Put emphasis on neatness, accuracy and use of sharp pencil.

b)		± 8.6cm	B_1	For the answer	
25 a)	P.6	M_{120} = 120 , 240 , 360 …… M_{80} = 80 , 160, 240, 32 CM = 240 LCM = 240 minutes 1 hour = 60 minutes 60 mins = 1 hour 1 min = $\frac{1}{60}$ 240 = $\frac{1}{1}$ x $\frac{240^{4}}{60}$ = **4 hours**	B_1 B_1 B_1 B_1	For multiples of 120 and 80 For LCM For changing minutes to hours. For 4 hours	Accept any other method. Make a review of related questions.
b)		6 2 0 a.m. + 4 0 0 **1 0 : 2 0 a.m.**	M_1 A_1	For correct method For correct answer	
26 a) b)	P.5	8 vertices Area = L x W = 6cm x 5cm = $30cm^2$	M_1 A_1	For correct method For correct answer	Put emphasis on units
c)		Volume = L x W x H = 6cm x 5cm x 4cm = $30cm^2$ x 4cm = 120cm	M_1 A_1	For the method For correct answer	
27			B_1 B_1 A_1	For correct arrow of -7 For -3 For correct answer	Guide learners to know the right movements.
		 -5, -3 , -1, 0 , 1, 2, 4, 6	M_1 A_1	For correct method For correct answer	
28	P.6	1US dollar = Ugsh 3700 800 US$ = Ug sh 3700 x 800 = Ug sh 2960,000 1Ksh = Ug sh 37 1500 Ksh = Ugsh 55,500 Total = Ugsh 2,960,000 + Ugsh 55500 Ugsh 3015500 **Ugsh 3,015,500**	B_1 B_1 B_1	For converting dollars to Ug shillings For converting K shillings to Ug shillings For addition	Take learners to bank and let the learner learn while seeing and touching.

		1Ksh = Ug sh 37 500,000Ksh = Ug 38x 500,000 = Ugsh 18500,000 = Ugsh 18500,000 Ugsh 3700 = **5000 US dollars**	B_1	For converting Ksh to Ugsh. For division For correct answer	
29 a)	P.5	 East	M_1 A_1	For the method For the answer	Help learners to use compass direction.
b)		Let the supplement be K $K + 101^0$ $K + 101^0 - 101^0 = 180^0 - 101^0$ $K = 79^0$	M_1 A_1	For the method For the answer	
30 a)	P.4	$1 - \frac{2}{5} = \frac{5}{5} - \frac{2}{5}$ $= 5 - \frac{2}{5}$ $= \frac{3}{5}$	M_1 A_1	For correct method For the answer	Give learners more numbers to practice. Accept any other method
b)		$\frac{3}{5} \longrightarrow 300$ $1 \longrightarrow 300 \div \frac{3}{5}$ $\longrightarrow \frac{300}{100} \times \frac{5}{3_1}$ $\longrightarrow$ **500 pupils**	M_1 A_1	For the method For the answer	
c)		500 - 300 **200 boys** Less boys = 300 girls - 200 boys **100 less** boys	B_1 B_1	For the method For the answer	
31 a)	P.4		B_1 B_1 B_1 B_1	For each correct entries	Write the ages of your learners and ask them to group.

Age	Frequency	Total age
12	𝍸	60
10	///	30
11	////	**44**
9	𝍸	54
15	///	**45**

		$\frac{30}{10_1} = \frac{3}{1} \times \frac{11 \times 4}{44} = \frac{54}{6_1}^{9}$ $15 \times 3 = 45$	M_1 A_1	For the method For the answer	
b)		$5+3+4+6+3$ $8+10+3$ 21	M_1 A_1	For the method For the answer	
32	P.6	Duration = ET - ST = HRS MIN 10 30 8 30 **2 00** 2 hours Distance = Speed x Time = 80km x 2 ~~hr~~ ~~Hr~~ = **160km**	B_1 B_1	For correct duration For correct answer	Give learners more numbers to do. Demonstrate practically
		Distance = Speed x Time = 60km x 3~~hr~~ ~~Hr~~ **= 180km**	M_1 A_1	For correct method For correct answer	Make a review on related areas.
		Total distance = $D_1 + D_2$ = 160km + 180km = 340km	B_1 B_1	For correct addition For the answer	