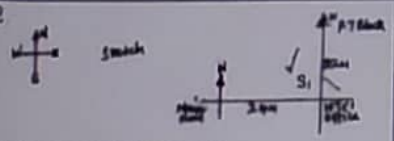
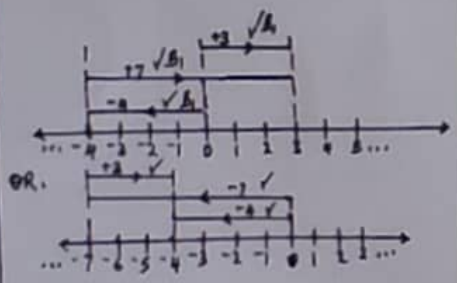
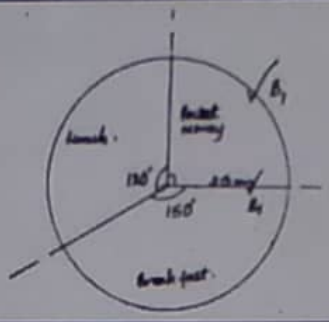
SOLUTIONS	COMMENT
b) $2(l + b) = 34cm$ $2(y + 4cm + y - 1cm) = 34cm$ *M1* $2y + 8cm + 2y - 2cm = 34cm$ $4y + 6cm - 6cm = 34cm - 6cm$ $\frac{4y}{4} = \frac{28cm}{4}$ $y = 7cm$	***M1*** *for formation of correct equation* ***A1*** for 7cm Follow through the working
30a) $= \frac{1}{2} \times \frac{3}{2} - \frac{3}{8}$ *M1* $= \frac{3}{4} - \frac{3}{8}$ $= \frac{6-3}{8}$ $= \frac{3}{8}$ *A1*	***M1*** For correct working/ method ***A1*** for $\frac{3}{8}$
b) $(0.45 + 0.55) + (0.8 - 0.3)$ $= 1.00 + 0.5$ $= \frac{1}{1} \div \frac{5}{10}$ $= \frac{1}{1} \times \frac{10^2}{5_1}$ $= 2$ *B1*	***B1*** for 1.00 ***B1*** for 0.5 ***B1*** for 2
31a) 1litre = $1000cm^3$ S^3 = Volume $3\ S^3 = 3\ 1000cm^3$ $S = 2\,|\,1000$ $2\,|\,500$ $2\,|\,250$ $5\,|\,125$ *M1* $5\,|\,25$ $5\,|\,5$ 1 $S = 2^3 \times 5^3$ $= 2 \times 5$ $= 2 \times 5$ $= 10cm$ *A1*	***M1*** For correct working ***A1*** for 10cm
b) Total surface area (TSA) = $6S^2$ $= 6 \times 10 \times 10$ *M1* $= 600cm^3$ *A1*	***M1*** For correct method ***A1*** for $600cm^2$
32  Scale: 1cm : 4meters $\frac{1cm}{4m} \times 246m = 6cm$ $\frac{1cm}{4m} \times 328 = 8cm$  shortest distance MH to P.7 = 10cm	

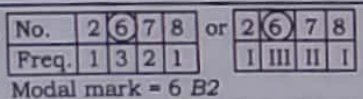
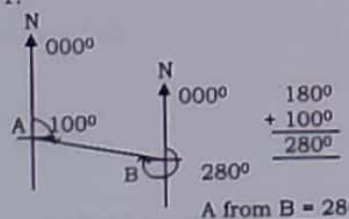
SOLUTIONS	COMMENT
SECTION A (40Marks)	*SECTION B (60Marks)*
Each question 2marks	21 – 05 22 – 06 23 – 05 24 – 05 25 – 06 26 – 04 27 – 05 28 – 05 29 – 05 30 – 05 31 – 04 32 – 05 Total 60

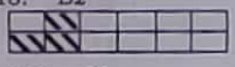
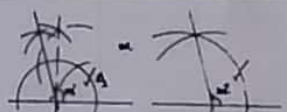
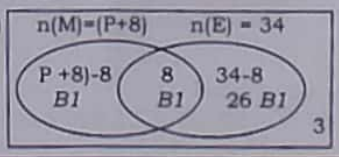
SOLUTIONS	COMMENT
n (M) = 33 + 8 = 41 *B1*	***B1*** For 41
22. 24.009 = 2.4009 x 10^1 B2 a. OR 24. 009 = 2.4009 X 101	***B2*** For 2.4009x10^1
b. 1 1two x 1 1two 1 1two *M1* 1 1 0two 1 0 0 1two *A1*	***M1*** for correct multiplication ***A1***For 1001_{two}
c. 5^3 5^2 5^2 5^0 1201_{five} = 1 2 0 1 └ 2x5x5 = 50_{ten} 50_{ten} = 5 | 50 | 0 5 | 10 | 0 2 Value = 200_{five}	***M1***For correct method ***A1*** For 200_{five}
23a) $\frac{1}{4}$ x 800 = 200children *B1* 800 – 200 = 600Adults $\frac{2}{3}$ x 600 = 400 women 600 – 400 = 200men *B1*	***B1*** For 200 children ***B1*** for 400 women
a) $\frac{3}{5_1}$ x $\frac{200^{40}}{1}$ = 120boys *B1* 200 – 120 = 80girls *B1* b) $\frac{80}{400}$ x 100% = 20% *B1*	***B1*** For120boys ***B1*** For 80girls ***B1*** For 20%
24a) -4 – (-7) = +3  b) 4 x 3 *B2*	***B1*** For -4 ***B1*** For ++7 ***B1*** For +3 ***B2*** For correct statement
25. Total expenditure: sh. 4500 sh. 7500 + sh. 6000 sh. 18000 *B1* Change to degrees Pocket money: $\frac{4500^5}{18000}$ x $\frac{360^{18}}{1}$ = 90° *B1* Breakfast: $\frac{7500}{18000}$ x 360° = 150° *B1* Lunch: $\frac{6000}{18000}$ x 360° = 120° *B1*	***B1***For 90° ***B1***For 150° ***B1***For 1200

SOLUTIONS	COMMENT
	***B1*** For drawing an accurate circle graph ***B1*** For 3.5cm
26. 1hr = 60min 1½ hr = $\frac{3}{2_1}$ x $\frac{60^{30}}{1}$min = 90min *B1* 90min - 55min = 35min *B1* The man waited for 35minutes.	***B1*** For 90min ***B1*** For 35min
b) D = 80km T = 40min S = 80km ÷ $\left(\frac{40}{60}\right)$ hr $\frac{80^{20}}{1}$ x $\frac{60}{40}$ = 120km/hr	***M1*** for correct method ***A1*** For 120km/h
27a) $ 1 —— Sh. 3600 ? —— sh. 72000 $ 1 x $\frac{72000^{2}}{3600_1}$ = $ 20 *A1*	***M1*** For correct method ***A1*** For = $ 20
b) 0.25kg ___ shs. 1250 2.5kg = 2.5 x 1250 0.25 = $\frac{25}{10}$ + $\frac{25}{100}$ x 1250 *M2* = $\frac{25}{10}$ x $\frac{100}{25_1}$ x 1250 = sh. 12500 *A1*	***M2*** For the method ***A1*** For 12,500
28.a) 1 ext < Sum of 2. opp. int. <s or vice – versa k + 5° + 2k + 25° = 4k + 20° *M1* 3k + 30 = 4k + 20° 3k – 4k = 20° – 30° *M1* $\frac{-k}{-k}$ = $\frac{-10^0}{-10^0}$ *A1*	***M1*** for formation of an equation ***M1***for collecting like terms ***A1*** For 10°
b) < RPT = (K+5°) + (2K + 25°) M1 = (10° +5°) + (2x10° + (25°) = 15° + 450 = 60° *A1*	***M1*** for correct substitution ***A1*** For 60°
29a) diameter 70cm — 4.4km C = πd = $\frac{22}{7_1}$ x $\frac{70^{10}}{1}$ = 220cm *B1* 1km = 100,000cm 4.4km = $\frac{44}{10}$ x 100,000cm = 440,000cm *B1* 1rev = 220cm 440,000cm = 440,000 x 1rev 220 = 2000rev	***B1*** For 220cm ***B1*** For 440,000cm ***B1*** For 2000rev

KAMPALA CAPITAL CITY AUTHORITY P.7 MATH MOCK MARKING GUIDE 2023

SECTION A (40marks)

SOLUTIONS	COMMENT
1. $6 \div 3 = 2$ or $\frac{3}{2\overline{)6}}$ or $2\overline{)6}\ 3$ $2 \times 3 = \underline{-6}$	**B2** For 6
2. $(PnQ)^1$  *B2*	**B2** For correct shaded Venn diagram
3. $(81 - 11) \div 7$ *M1* $70 \div 7$ 10 *A1*	**M1** For the method (Distributive property) **A1** for 10
4. Two thousand twenty three. *B2*	**B2** For correct answer only.
5. $2^{+2}, 4^{+3}, 7^{+5}, 12^{+7}, 19^{+11}, \underline{30}$ *A1* OR $2 + 2 = 4$ $4 + 3 = 7$ *M1* $7 + 5 = 12$ $12 + 7 = 19$ $19 + 11 = 30$ *A1*	**M1** For correct method / working **A1** For 30
6. $3 - 2m < 7$ $3 - 3 - 2m < 7 - 3$ *M1* $\frac{-2m}{-2} > \frac{4}{-2}$ $m > -2$ *A1*	**M1** For correct method **A1** For $M > -2$
7. $20\overline{)13.00}$ *M1 A1* OR $20\overline{)13.00}$ 0.65 $2x6 - 12.00$ 1.00 $2x0.5 - 1.00$ OR $\frac{13}{20} \times 5 = \frac{65}{100} = 0.65$	**M1** For correct working **A1** for 0.65 follow thru'
8. $-5^0C + {}^+8 = {}^+3$ *A1*	**M1** For $^-5 + {}^+8$ **A1** For $^+3$
9.  Modal mark = 6 *B2*	**B2** For 6
10. Distance: 1km = 1000m $54km = \frac{54}{1} \times 1000m$ = 54000m Time: 1hr = 3600sec $S = \frac{54000^{15}m}{\cancel{3600}_1 sec}$ *M1* = 15m/sec *A1*	**M1** For correct working **A1** For 15m/sec
11.  A from B = 280°	**B2** For 280° Follow through

SOLUTIONS	COMMENT
12. First 30 words = sh. 20,000 Extra words (45 – 30) Sh. 1000 x 15 = + sh. 15000 *B1* sh. 35000 *B1*	**B1** For sh.15000 **B1** For sh. 35000 Follow thru'
13. 1m = 100cm $1m^2 = 100cm \times 100cm$ $= 10000cm^2$ $1m^2 = 10000cm^2$ $0.04m2 = \frac{4}{100} \times 10000cm^2$ *M1* = 400cm2 *A1*	**M1** For correct working **A1** For $400cm^2$
14. $k^2 + 2k^2 - 3k + 3k$ *M1* $3k^2$ *A1*	**M1** For correction of like terms **A1** for 3k2
15. i) No. of subsets = 2^n (where n is no. of elements) $= 23$ $= 2 \times 2 \times 2$ $= 8$ ii) Listing: { }, {c,o,w}, {c}, {o}, {w}, {c,o} {c,w}, {o,w} 8subsets	**M1** for working or listing **A1** for 8
16. C I V 100 + 4 104 *B2*	**B2** For104
17. LCM = $2^2 \times 3^2 \times 5$ $= 2 \times 2 \times 3 \times 3 \times 5$ $= 4 \times 9 \times 5$ = 180	**M1** For correct method **A1** For 180
18. *B2*  $\frac{1}{4_1} \times 12^3 = 3sq$ $25\% = \frac{25}{100}$ $= \frac{1}{4}$	**B2** For correct shading of any 3 squares
19. 	**B2** For correct method of constructing 105^0
20. A pen costs – sh. (2000 + k) A book costs – sh. $\frac{(2000 + k)}{2}$ *B2*	**B2** for the cost of a book OR $\frac{1}{2}(2000 + k)$ OR $1000 + \frac{1}{2}k$
SECTION B 21. $n(\mathcal{E}) = 70$ a)  b) $(P+8)-8+8+26+3 = 70$ $P + 8 + 29 = 70$ $P + 37 - 37 = 70 - 37$ $P = 33$ *B1*	**B1** For $(P+8)-8$ **B1** For 8 **B1** For 26 **B1** For 33