KAMPALA CAPITAL CITY AUTHORITY P.7 MATHEMATICS MOCK MARKING GUIDE 2022.

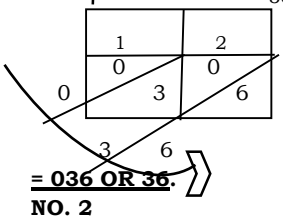
SECTION A

NO.1

12 ×3 **36**

3×2 = 6
3×1 = 3

T O
1 2 =(1×10) + (2×1)
= 10 + 2
= (3×10) + (3×2)
= 30 + 6 = **36**



= 036 OR 36.

NO. 2

2 0 3 Five
1 4 Five
1 3 4 Five

NO 3

$3n = 80^o + 40^o$ (sum of 2 Int $<_s$ = 1 Opp Ext <)

$\frac{3n}{3} = \frac{120^0}{3}$

n = 40°

NO. 4

$= \frac{(2\times3)+-2}{3} = \frac{6-2}{3} = \frac{4}{3}$ 1 rem 1

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

NO. 5

Sample space = (1) ,2 , 3 ,(4) , 5, 6
Event = 1, 4

$P = \frac{n(E)}{n(s.s)} = \frac{2}{6}$

NO. 6

$= (7\times10\times10\times10) + (6\times10) + (8\times\frac{1}{10^1})$
$+ (4\times\frac{1}{10^2})$
$= 7000 + 60 + (8\times\frac{1}{10}) + (4\times\frac{1}{10\times10})$
$= 7000 + 60 + (\frac{8}{10}) + (\frac{4}{100})$
= 7000 + 60 + 0.8 + 0.04
= 7000.00
60.00
0.80
0.40
= 7060.84

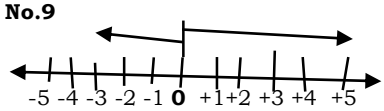
NO. 7

$\frac{1}{2}L$ = 1 Child
1 L $= (1\div\frac{1}{2})$ Children
$= (1\times\frac{2}{1})$ Children
20 L = (2×20) Children
= **40 Children**

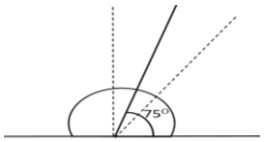
NO. 8

$= \frac{8+10+4+1+6+9}{6}$
$= \frac{38\ 19}{6\ 3}\ 6\ rem\ 1 = \mathbf{6\frac{1}{3}}$

No.9



NO 10



NO.11

= Ug.sh.(3600×1050)
= **Ugsh. 3,780,000**

NO. 12

147 = 100 +40 +7
= C + XL +VII
147 = CXLVII

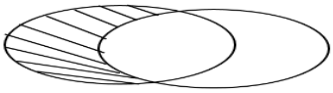
100 = C
40 = XL
+ 7 = VII
147 = CXLVII

NO.13

$= \frac{2\times2+1}{2}\%$
$= \frac{5}{2}\%$
$= \frac{5}{2}\div\frac{100}{1}$

$= \frac{5}{2}\times\frac{1}{100}$
$= \frac{1\times1}{2\times20}$
$= \mathbf{\frac{1}{40}}$

NO.14



NO 15.

$= 90^o - (+2x + 30^o)$
$= 90^o - 2x - 30^o$
$= 90^o - 30^o - 2x$
$= 60^o - 2x$

NO. 16

$= \frac{P}{2} + \frac{1}{1} = \frac{3}{1}$ LCD = 2
$= (\frac{P}{2}\times2) + (\frac{1}{1}\times2) = (\frac{3}{1}\times2)$
= P + 2 = 6
= P + 2 – 2 = 6 – 2
P = 4

NO.17

A = B×H
= 12dm×8dm
= 96dm

$^{1}1\ 2$
×8
9 6

NO. 18

HRS	MIN
3^1	45
+1	50
5	35

45
+ 50
95
- 60
35 **OR**
$\frac{95}{60}$ = 1 rem 35

NO 19

Fraction given out
$= \frac{1}{4}\ of\ \frac{2}{3}$
$= \frac{1}{\cancel{4}_2}\times\frac{\cancel{2}^1}{3} = \frac{1}{6}$

Fraction remained
$= \frac{2}{3} - \frac{1}{6}$
VLCD = 6
$= \frac{(\frac{2}{\cancel{3}_1}\times\cancel{6}^2) - (\frac{1}{\cancel{6}_1}\times\cancel{6}^1)}{6}$
$= \frac{(2\times2)-(1\times1)}{6}$
$= \frac{4-1}{6} = \frac{\cancel{3}^1}{\cancel{6}_2} = \mathbf{\frac{1}{2}}$

3	3	2
3	3	3
	1	1

2×3=6

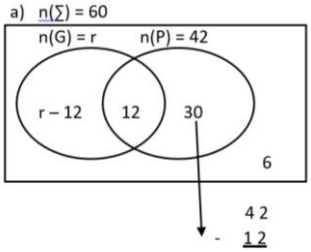
NO. 20

(2x+50) = (4x+20)
2x+50 = 4x+20
50 – 20 = 4x – 2x
$\frac{\cancel{30}^{15}}{\cancel{2}_1} = \frac{\cancel{2}x^1}{\cancel{2}_1}$
15 = x

SECTION B

NO.21

a) n(∑) = 60



42
- 12
30

b)
r -12+12+30+6 =60
r + 12+30+6 – 12 = 60
r +48 – 12 = 60
r + 36 = 60
r +36 – 36 = 60 -36
r = 24 Students.

c) = r – 12 + 30
= (24 -12)+30
= 12 + 30
= 42 students.

NO.22

ITEM	UNIT PRICE	QUANTITY	AMOUNT	
Bread			Sh.7000	7000
Meat		$\frac{1}{2}$ Kg	Sh.5000	5000
Rice	Sh.4000 per kg		Sh.6000	6000
Sugar			Sh.4500	4500
Milk			Sh.3000	+3000
Total expenditure			Sh.25,500	25500

Bread
3500
× 2
7000

Meat
$\frac{15000}{10000} = \frac{1}{2}$

Rice

$= 6000 \div 1\frac{1}{2}$

$= 6000 \div \frac{3}{2}$

$= 6000^{2000} \times \frac{2}{3_1}$

$= 4000$

Sugar

$= \frac{15}{100} \times 3000$

$= 4500$

NO. 23

a)

CD = 400
XL = 40
IX = 9
CDXLIX = 449

H T O $T^{ths}H^{ths}$
4 3 5. 1 6

Hundreds(100)
$(6 \times \frac{1}{100})$

$= \frac{6}{100}$

= 0.06

Sum = 100.00
= 0.06
100.06

NO.24

$n + 3n + 126^o + 90^o = 360^o$
$4n + 216^o = 360^o$
$4n + 216^o - 216^o = 360^o - 216^o$
$4n = 144^o$
$\frac{4n}{4} = \frac{144^o}{4}$
n = 36

Let the salary be x

$\frac{36}{360} \times x = sh.120{,}000$

$360 \times \frac{36x}{360} = sh.120{,}000 \times 360$

$\frac{1\ 36x}{36\ 1} = \frac{sh.\ 120{,}000 \times 360\ \ 10}{36\ 1}$

X = sh. 1,200,000
He earns sh. 1,200,000

NO.25

$= \left(\frac{12}{100} + \frac{54}{10}\right) \div \left(\frac{3}{100} \times \frac{6}{10}\right)$

$= \frac{12^2}{100_1} \times \frac{54^{18}}{10_1} \times \frac{100^1}{3_1} \times \frac{10^1}{6_1}$

$= \frac{2 \times 18 \times 1 \times 1}{1 \times 1 \times 1 \times 1}$

$= \frac{36}{1}$

= 36.

B)

Let the fraction be Y
Y = 0.5454.....**i**
Y×100 = 0.5454×100
100Y = 54.5454.....**ii**
Subtract i from ii
100Y = 54.5454
− Y = 0.5454
99Y = 54.0000

$\frac{99Y}{99} = \frac{54}{99} = \mathbf{\frac{6}{11}}$

NO 26.

Duratiion = E.T - S.T
= 1 : 00
= + 12 : 00
13^{12} : 00^{60}
- 8 : 30
4: 30

= **$4\frac{1}{2}$ hrs or 4hrs and 30 minutes**

b)

$S = \frac{D}{T}$

$= 270\ Km \div 4\frac{1}{2}\ hrs \quad = 270Km \div \frac{9}{2} hrs$

$= 30Km \times 2hrs$

$= 270^{30}Km \times \frac{2}{9_1}\ hrs$

S = **60Km/hr.**

NO.27

955 = 900 + 50 + 5
= CM + L + V
955 = CMLV

900 = CM
50 = L
+ 5 = V
OR 955= CMLV

b)

H	T	O
4	9	6
4^1	9	0
+	1	0
5	0	0

C)

3 – 4 = P (mode 5)
(3 +5) – 4= P (mode 5)
8 – 4 = 5 (mode 5)
4 = P (mode 5)

:. 490 = 500 goats

NO. 28

From: $\frac{1}{2}h(a+b) = A$

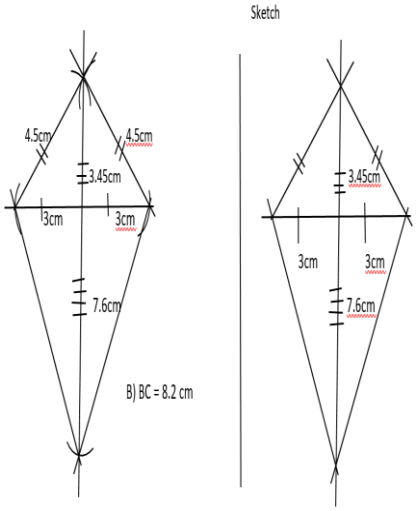
$\frac{1}{2_1} \times 8^4(a+12) = 72$

4a + 48 = 72
4a + 48 – 48 = 72 – 48
$\frac{4a}{4} = \frac{24}{4}$
a = 6m
SR = 6m

b)

Area RSP
$= \frac{1}{2} \times b \times h$
$= \frac{1}{2_1} \times 6^3m \times 8m$
= 3m×8m
= 24m²

NO.29



NO. 30

S.I = P×T×R
$= sh.120{,}000 \times 4 \times \frac{5}{100}$
$= sh.1200 \times 4 \times 5$
= sh. 24,000

b)

Amount = P + I
= sh.120,000
+ sh. 24,000
Sh. 144,000

NO.31

2(2m+4) – 2(+m – 2) = 6 **OR**
2×2m + 2×4 - 2×m + 2×2 = 6
4m + 8 – 2m + 4 = 6
4m -2m + 8 + 4 = 6
2m + 12 = 6
2m + 12 – 12 = 6 – 12

$\frac{2m}{2} = \frac{-6}{2}$

m = -3

b) Let Kiku's age be m

Now

Nakintu	Kiku
3m	m

In 5Yrs

Nakintu	Kiku	Total
3m+5yrs	m+5yrs	46yrs

3m + 5yrs +m +5yrs = 46yrs
3m +m +5yrs +5yrs = 46yrs
4m +10yrs = 46yrs
4m + 10yrs–10yrs = 46yrs–10yrs
4m = 36yrs

$\frac{4^1m}{4_1} = \frac{36^9}{4_1}$

m = 9yrs.

Nakintu = 3m + 8yrs
= 3×9yrs + 8yrs
= 27yrs +8yrs = **35yrs.**

NO. 32

$= n \times n \times n$
$= n^3$ **OR**

$= n^2 \times n^1$
$= n^{2+1}$
$= n^3$

b)

$m^6 \div m^2$

$\frac{m \times m \times m \times m \times m \times m}{m \times m}$

$= m \times m \times m \times m$
$= m^4$

OR

$m^6 \div m^2 = m^{6-2}$
$= m^4$

c) $\frac{a \times a \times a \times a \times a \times a \times a}{a \times a \times a}$

$= a^4$

OR

$\frac{a^2 \times a^5}{a^3} = \frac{a^{2+5}}{a^3}$

$a^7 \div a^3 = a^{7-3}$

$= a^4$