P.7 MATHEMATICS MARKING GUIDE END OF TERM 1 2024

1. $\frac{3}{4} + \frac{1}{4}$

$\frac{3+1}{4}$

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

2. 12,000
+ 12
12,012

3. $m + 3 = 2$ (finites)

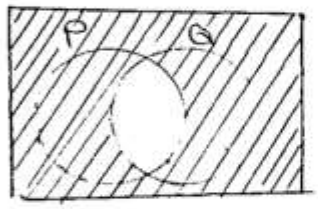
$m + 3 - 3 = 2 - 3$ (finites)

$m = (2+5) - 3$ (finites)

$m = 7 - 3$ (finites)

$m = 4$ (finites)

4.



5. 3 | h | 1 five

$h \times 5 = 10$

$\frac{5h}{5} = \frac{10}{5}$

$h = 2$

6. 5+5+5+2 eggs

15+2 eggs

17 eggs

7. $(5 \div \frac{1}{2})$ glasses

$5 \times \frac{2}{1}$ glasses

10 glasses

∴ Annet received 10 visitors on that day.

8. 0.00425

$0.00425 \times 10 = 0.0425$

$0.0425 \times 10 = 0.425$

$0.425 \times 10 = 4.25$

$\therefore 0.00425 = 4.25 \times 10^{-3}$

9. 1, 3, 6, 10, 15, 21

+2 +3 +4 +5 +6

10. Accept the correct angle got after measuring using a protractor.

11. $3y + 60° = 180°$

$3y + 60° - 60° = 180° - 60°$

$3y = 120°$

$\frac{3y}{3} = \frac{120°}{3}$

$y = 40°$

12. 6:20 p.m
+ 4 00 hrs
10:20 p.m

10:20 p.m
+ 12 00 hrs
22 20 hrs

13. $4a - b + a - 3b$

$4a + a - 3b - b$

$5a - 4b$

-ves
-
-
-4b

14. CH2632755
- CH2632656
99+1

100 notes

Amount

Sh. 5000 × 100

Sh. 500,000

15.

Distance in M	Time in sec
1 km = 1000m	1 hr = 3600 sec
18 km = 18 × 1000m	
18,000 M	

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

$\frac{18,000 \text{ m}}{3600 \text{ sec}}$

$\frac{10 \text{ m}}{2 \text{ sec}}$

5 m/sec

16. $\frac{2}{5} \leftrightarrow \frac{2 \times 2}{5 \times 2} = \frac{4}{10}$

$\frac{2 \times 3}{5 \times 3} = \frac{6}{15}$

$\therefore \frac{2}{5} \leftrightarrow \frac{4}{10}$ and $\frac{6}{15}$

17. $\frac{\text{Sum of data}}{\text{No of data}}$ = Mean

$\frac{k+3+5+2}{4} = 3$

$\frac{(k+10) \times 4}{4} = 3 \times 4$

$k + 10 = 12$

$k + 10 - 10 = 12 - 10$

$k = 2$

18.

Old	New
100%	110%
Sh. 320,000	

100% rept Sh. 320,000

1% repts Sh. $\frac{320,000}{100}$

1% repts Sh. 3,200

New salary

Sh. 3200 × 110

$$\begin{array}{r} \text{Sh. } 32000 \\ \times \quad 11 \\ \hline 032000 \\ +320000 \\ \hline \text{Sh. } 352,000 \end{array}$$

19. Square of 16

$16^2 = 16 \times 16$

$$\begin{array}{r} {}^{3} \\ 16 \\ \times 16 \\ \hline {}^{1}096 \\ +160 \\ \hline 256 \end{array}$$

20. V = Base area × H

$V = 40cm^2 \times 50cm$

$$\begin{array}{r} V = 400 \\ \times \quad 5 \\ \hline 2000 \end{array}$$

$V = 2000\ cm^3$

SECTION B

21 a)

$17 - d = 12$

$17 - 17 - d = 12 - 17$

$\frac{-d}{-1} = \frac{-5}{-1}$

$d = 5$

(b)

$17 - d + d + 12 + d - 1$

$(17-5) + 5 + 12 + (5-1)$

$12 + 5 + 12 + 4$

$17 + 16$

33 guests

(c) Chicken complement

$17 - d + d - 1$

$(17-5) + (5-1)$

$12 + 4$

16

Probability $= \frac{n(E)}{n(SS)}$

$\frac{16}{33}$

22) a)

$\begin{array}{r|l} y & 1 \\ \hline 2 & 4 \\ & y \end{array} = \begin{array}{r|l} 5 & 1 \\ \hline 3 & 1 \\ & \text{five} \end{array}$

$(2 \times y) + (4 \times 1) = (3 \times 5) + (1 \times 1)$

$2y + 4 = 15 + 1$

$2y + 4 = 16$

$2y + 4 - 4 = 16 - 4$

$2y = 12$

$\frac{2y}{2} = \frac{12}{2}$

$y = 6$

(b)

$$\begin{array}{r} {}^{1} \\ 3\ 2\ 3 \\ -1\ 1\ 4 \\ \hline 2\ 0\ 4 \end{array}$$

five, five, five

$5 + 3 = 8$

$8 - 4 = 4$

$1 - 1 = 0$

$3 - 1 = 2$

(23)

1st no	2nd no	3rd no	Sum
y-2	y	y+2	18

$y - 2 + y + y + 2 = 18$

$y + y + y + 2 - 2 = 18$

$3y = 18$

$\frac{3y}{3} = \frac{18}{3}$

$y = 6$

Range = H − L

$(y+2) - (y-2)$

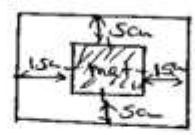
$(6+2) - (6-2)$

$8 - 4$

4

(24)

a)



100cm

Length of mat.

100 cm − (5cm + 5cm)

100 cm − 10 cm

90cm

Length of the table

90cm + (15cm + 15cm)

90cm + 30cm

120cm

(b)

Area of the table	Area of the mat
L × W	S × S
120cm × 100cm	90cm × 90cm
12,000 cm²	8100 cm²

Area not covered by the mat.

$$\begin{array}{r} {}^{0}\ {}^{1}\ {}^{1} \\ 12,000\ cm^2 \\ -8100\ cm^2 \\ \hline 3,900\ cm^2 \end{array}$$

25 a)

2	40	30
2	20	15
2	10	15
3	5	15
5	5	5
	1	1

LCM = $2 \times 2 \times 2 \times 3 \times 5$

$4 \times 6 \times 5$

4×30

120

Common interval is equal to LCM

120 minutes to hrs

60 minutes = 1 hr

1 min = $\frac{1}{60}$ hr

120 min = $(\frac{1}{60} \times \frac{2}{120})$ hrs

2 hours.

∴ The two bells will ring together after 2 hours.

b)

11 : 20 a.m

+ 2 00 hrs

13 20 hrs

13 20 hrs

− 12 00 hrs

1 : 20 p.m

26. a)

P = A − S.I

Sh. 315,000

− Sh. 015,000

Sh. 300,000

b) P × R × T = S.I

Sh. 300,000 × $\frac{10}{100}$ × T = Sh. 15,000

Sh. 300,000 × $\frac{10}{100}$ × T = Sh. 15,000

Sh. 30,000 × T = Sh. 15,000

T = $\frac{1}{2}$ year

∴ The loan was for a half a year.

27) a = 3, b = a, c = b + 4

a = 3, b = 3, c = 3 + 4

c = 7

(a) ab + c

a × b + c

3 × 3 + 7

9 + 7

16

(b) $3c^2 + a$

3 × c × c + a

3 × 7 × 7 + 3

3 × 49 + 3

147 + 3

150

28)

a) 3 + 2 + 4 + 1

5 + 5

10 pupils

(b) Average mark.

$\frac{\text{Sum of items}}{\text{No of item}}$

$\frac{(10 \times 3) + (8 \times 2) + (6 \times 4) + (9 \times 1)}{10}$

$\frac{120 + 160 + 240 + 90}{10}$

$\frac{280 + 330}{10}$

$\frac{610}{10}$

61

(c) 2 + 1

3 pupils

29) ~~a)~~

Buying price

Sh. 170,000 × 3

Sh. 510,000

Total bars of soap

3 × 30

90

Selling price

Sh. 6500 × 90

Sh. 65000 × 9

Sh. 585,000

Profit = Selling Price − B.P

Sh. 585,000

− Sh. 510,000

Sh. 75,000

30) a)

Jane	Gift	Mercy	More
3	5	7	7 − 5 = 2

Sh. 60,000

2 parts rept Sh. 60,000

1 part rept Sh. $\frac{60,000}{2}$ = Sh. 30,000

1 part rept Sh. 30,000

Total Share = 3 + 5 + 7 = 15

Sh. 30,000 × 15

Sh. 150000 × 3

Sh. 450,000

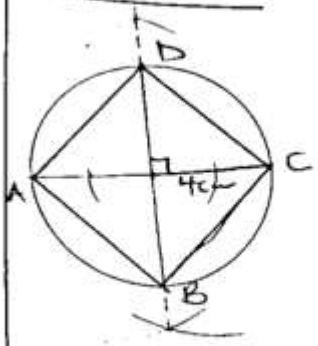
b) Jane

Sh 30,000 × 3

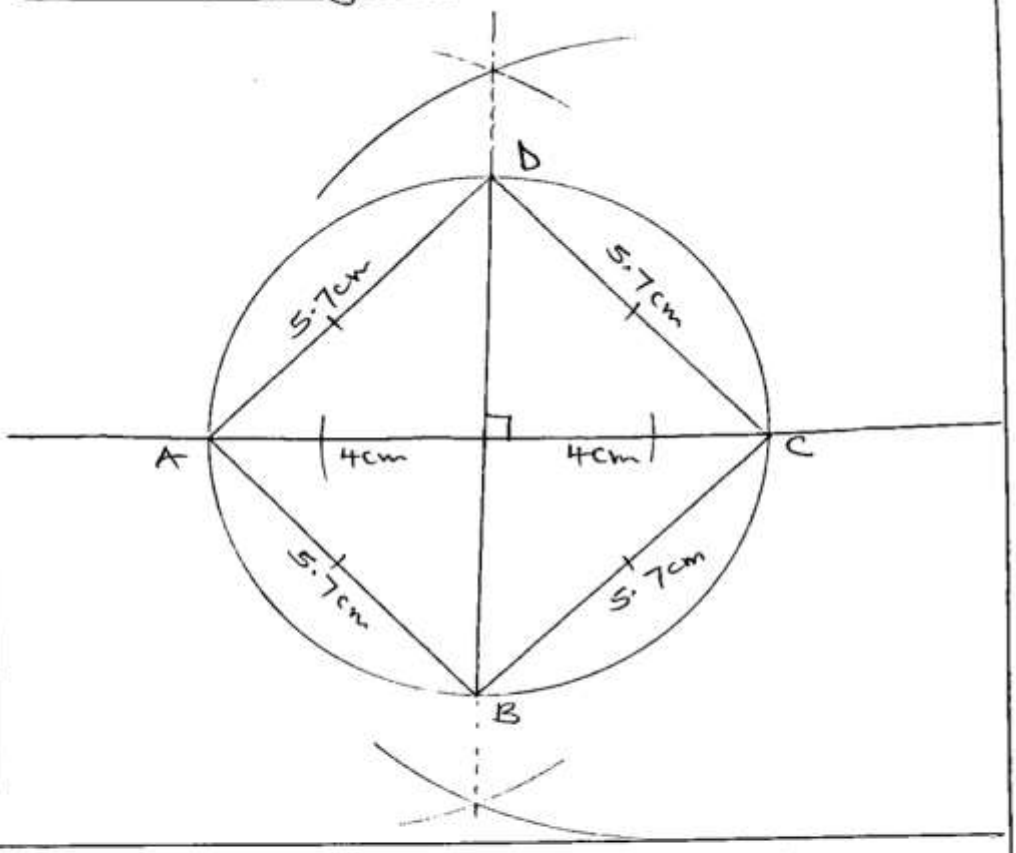
Sh. 90,000

31. Sketch

a)



Accurate diagram.



b) Perimeter

4 sides

$4 \times 5.7\text{cm}$

22.8 cm

32. Value of Y.

a) $(Y+3)\frac{cm}{cm} = 8\frac{cm}{cm}$

$Y + 3 = 8$

$Y + 3 - 3 = 8 - 3$

$Y = 5$

Height of the cuboid.

$(Y+1)$ cm

$(5+1)$ cm

6 cm

b)

Length	Width	Height
8cm	~~6cm~~ 5cm	6cm

Total length of the Wire

$4L + 4W + 4H$

$4 \times 8\text{cm} + 4 \times 5\text{cm} + 4 \times 6\text{cm}$

$32\text{cm} + 20\text{cm} + 24\text{cm}$

32 cm
20 cm
+ 24 cm
76 cm

∴ The total length of the wire used is 76cm