1. $\frac{40}{10} = \frac{4}{1} = 4$

2. $(\sqrt{m+7})^2 = 4^2$
$m + 7 = 4 \times 4$
$m + 7 = 16$
$m + 7 - 7 = 16 - 7$
$m = 9$

3. $(3 \times \frac{1}{10}) + (8 \times 10)$
$= 0.3 + 80$
$= 80.3$

4. $\frac{2}{8} \times \frac{8}{1}$
$= 2$

5. $p + 70^\circ = 180^\circ$
$p + 70^\circ - 70^\circ = 180^\circ - 70^\circ$
$p = 110^\circ$

6. $V = S^3$
Capacity $= \frac{10cm \times 10cm \times 10cm}{100cm^3}$
$= 1$ litre.

7. 17, 12, 8, 5, 3, 2
$17 - 5 = 12$
$12 - 4 = 8$
$8 - 3 = 5$
$5 - 2 = 3$
$3 - 1 = 2$

8. $90 - (y + 40^\circ) = 30^\circ$
$90^\circ - y - 40^\circ = 30^\circ$
$50^\circ - y = 30^\circ$
$y = 20^\circ$

9. S.P = B.P. + Profit
= Shs60,000 + Shs7,200
= Shs67,200

10. 1 trip = 59 passengers
12 trips = $(12 \times 59)_{passengers}$
= 708 passengers

11. 2 + 5 (finite 6)
= 7 (finite 6)
7 ÷ 6 = 1 rem. 1
= 1 (finite 6)

12.

rainfall	0	2	3	4	5	6
freq	1	1	2	1	1	1

Mode = 3

13. $A = \pi r^2$
$= \frac{22}{7} \times 7cm \times 7cm$
$= 154cm^2$

14. 1 doz = 12 cups
1½ dozens = 12 + 6 = 18 cups
6 cups cost Shs3,000
1 cup will cost $\frac{Shs3,000}{6} \times 18$
= Shs9,000

15. $1 - \frac{3}{4}$
$= \frac{1}{4}$

Percentage failure
$= \frac{1}{4} \times 100\%$
$= 25\%$

16.

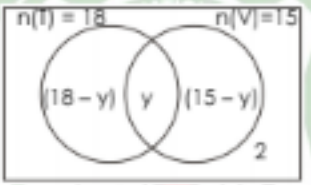
17. 6 twenty thousand
= 6 x Shs20,000
= Shs120,000

18. Distributive Property

19. Jane's age
= 7 + 4
= 11years

20. 2 five – fives and 3 fifths
$= (2 \times 5 \times 5) + \frac{3}{5}$
$= 50\frac{3}{5}$

21a). $n(\Sigma) = 30$



b). $18 - y + y + 15 - y + 2 = 30$
$18 + 15 + 2 - y = 30$
$30 - y = 30$
$35 - 30 = y$
$y = 5$

22. The largest counting number being **m**
Middle number = m – 1,
Smallest number = m – 2
$m + m - 1 + m - 2 = 18$
$3m + 3 + 3 = 18 + 3$
$\frac{3m}{3} = \frac{21}{3}$
$m = 7$
The smallest number = m – 2
= 7 – 2
So, the smallest number = 5

23a). L x W x H = V
20cm x p x 8cm = 480cm³
$\frac{160p}{160} = \frac{480cm^3}{160}$
p = 3cm.

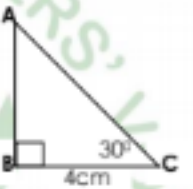
b). **Base area**
= L x W
= 20cm x 3cm
= 60cm²

24a). No. of girls
$= \frac{3}{5} \times 60$
= 33 girls.

b). **No. of boys**
= 60 – 36
= 24 boys

Difference in number
= 60 – 24
= 12 more girls than boys.

25a) sketch



Accurate diagram;
Must bear, all the information with accurate measurements.

b). AC = 4.6 cm

26. Let Harrison's age be **h**
Alinda's age = h + 5
$h + h + 5 = 37$
$2h + 5 = 37$
$2h + 5 - 5 = 37 - 5$
$\frac{2h}{2} = \frac{32}{2}$
$h = 16$

Alinda's age in 15 **years time.**
= h + 15
= 16 + 15
= 31 years

27. **Value of** 6 **in** 39462
= 3 x 10,000
= 30,000

Value of 6 **in** 39462
= 6 x 10
= 60

Product = 30,000 x 60
= 1,800,000

28a.) -2 + 5 = +3

b). Wednesday = 3
= 3 – 32 (finite 7)

But 32 ÷ 7 4 rem. 4
3 – 4 (finite 7)
= (3 + 7) – 4(finite 7)
= 10 – 4 (finite)
= 6 (finite 7)
The day was Saturday.
29.a). 48 months = 48 ÷ 12
= 4 years

P x R x T
= Shs300,000 x $^{5}/_{1000}$ x 4
= Shs60,000
b). Amount
= principal + interest
= Shs300,000 + Shs60,000
= Shs360,000
30a). Let the sector angle for failures be **p**.
p + 120° + 150° + 60° = 360°
p + 330° = 360°
p + 330° – 330° = 360° – 330°
p = 30°
b). Number of candidates who passed in division one.
= $\frac{60°}{360°}$ x 72
= 12 candidates.
c). Difference in angles
= 150° – 120°
= 30°
Difference in No. of candidates
= $\frac{30°}{360°}$ x 72
= 6 more candidates in Div. 1 than Div.3
31a). 1km = 1000m
36km = 36 x 1000m
= 36,000m
1hr = 3600 seconds
In m/s = $\frac{36,000m}{3600 \text{ seconds}}$
= 10 m/s
b). Time taken
11:00am
- 9:00am
2:00
Time taken = 2 hours
Average speed
= $\frac{200km}{2hrs}$
= 100km/hr
32a). $\frac{253}{23}$ = 11
b). 3456 ÷ 10 = 345.6
345.6 ÷ 10 = 34.56
34.56 ÷ 10 = 3.456
4.356 x 10^{3}

Code – RM 21