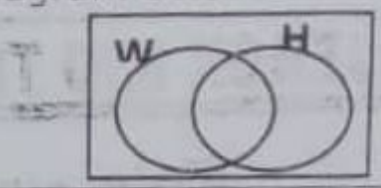
SECTION A (40 Marks)

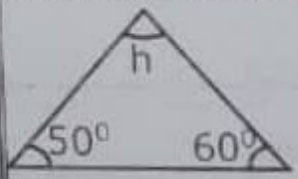
1. **Workout:**

$$\begin{array}{r} 2\ 1 \\ \times\ 4 \\ \hline \\ \hline \end{array}$$

2. Shade set **W∪H** in the Venn diagram below.



3. **Find the value of h in degrees.**



4. Round off **4657** to the nearest hundreds.

5. A bottle holds **15000ml** of water. How many litres does it hold?

6. **Workout:**

$$\begin{array}{r} 4\ 0_{\text{five}} \\ +\ 1\ 2_{\text{five}} \\ \hline \\ \hline \end{array}$$

7. The prime factors of a number are; $\{2_1, 2_2, 3_1 \text{ and } 5_1\}$.

   Find the number.

8. If **a = 5, b = 4** and **c = 2**, workout the value of **ca + b**.

9. **Simplify:** $^{-}5 - {}^{\cdot}4$

10. **Workout:** 13.76 + 1.9

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11. Using a ruler, a pencil and a pair of compasses only construct an angle of **60°**

12. Kato went for lunch at the time shown on the clock face.

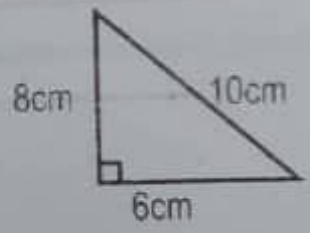
What time was it?

13. **Solve for g:** $g + 7 = 15$

14. Given that 🍅🍅🍅🍅🍅 represents **20** tomatoes. How many tomatoes are represented by 🍅🍅?

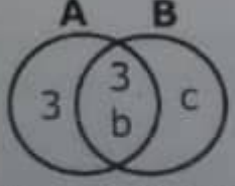
15. Joyce bought a hen at **sh.25000** and sold it at **sh.20,000**. What percentage loss did she make?

16. **Find the area of the triangle below.**



17. Decrease **4200**kg in a ratio of **3:5**.

18. **Use the Venn diagram below to answer the questions.**



How many subsets has set **(A∩B)**?

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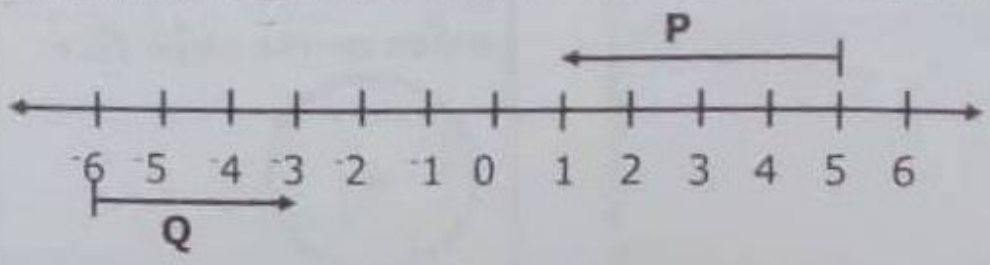
19. Name the integers for arrow P and Q on the number line below.



P = _____

Q = _____

20. Workout:

Wk	Days
4	5
+ 1	6

SECTION B (60 Marks)

21. a) Workout:

$$\begin{array}{r} 4\ 3\ 0_{five} \\ -\ \ 2\ 4_{five} \\ \hline \end{array}$$

(02 marks)

b) Change 14_{five} to decimal base.

(02 marks)

22. a) Simplify: $5 + 20 \div 4$

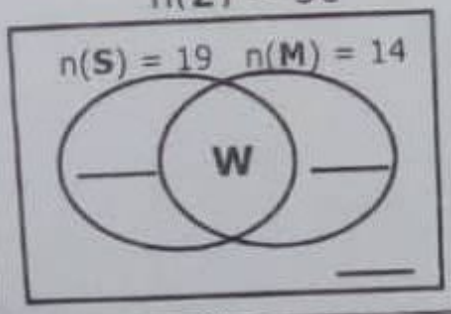
b) Workout:

$$6\overline{)2436}$$

23. In a class of **30** pupils, **14** like maths (M), **19** like sceince (S), **3** pupils like none of the subjects while W like both subjects.

a) **Complete the Venn diagram.**

$n(\Sigma) = 30$



(03 marks)

b) How many pupils like only one subject?

(03 marks)

24. Cathy, Oliva and Tonny shared **sh. 360,000** in the ratio of **2:4:3** repectively.

a) How much did each get?

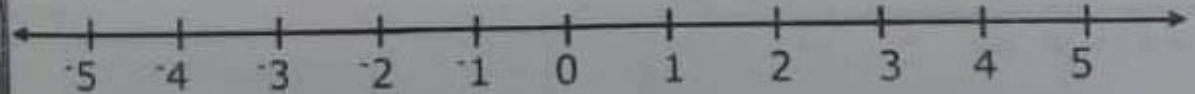
(04 marks)

b) Express the share of Oliva as a fraction.

(02 marks)

25. Workout $^{+}4 + {}^{-}6$ using a number line.

a)



(03 marks)

b) **Use $<$, $>$ or $=$ to complete correctly.**

i) $^{-}3 \square {}^{-}9$

ii) $^{+}10 \square {}^{-}10$

(02 marks)

26. **Below are prime factors of X and Y as shown below.**

$F_X = \{2_1, 2_2, 3_1\}$

$F_Y = \{2_1, 3_1, 5_1\}$

a) Find $F_X \cap F_Y$.

(01 mark)

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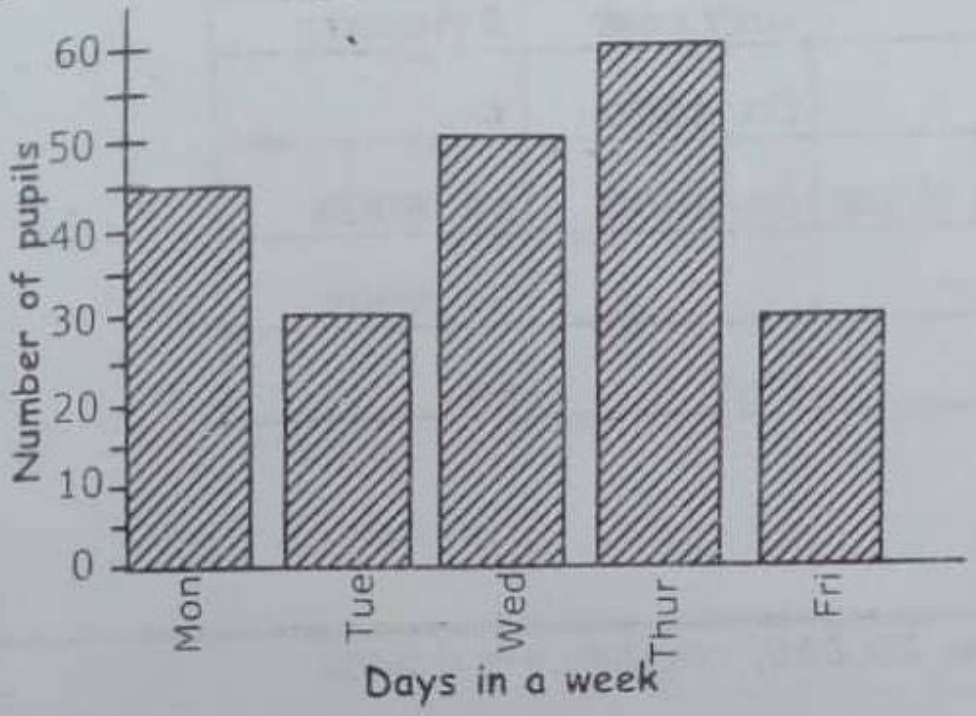
9. The graph below shows the number of pupils who attended classes in a week. Study it carefully and answer the question.



) How many pupils were in class?

(01 mark)

) Find the number of pupils who were absent on Tuesday?

(02 marks)

c) Calculate the average attendance of the pupils in class.

(03 marks)

30. A driver started travelling at 6:00am moving at a speed of **120**km/hour. If he reached his destination after **2½**hours.

e) When did he reach his destination?

b) Calculate the distance he travelled.

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31. a) **Below is a shopping table. use it to answer the question.**

Complete the table.

Items	**Unit cost**	**Amount**
2kg of rice	Sh. **4000**	Sh. _____
_____ packets of salt	Sh. **2000**	Sh. **6000**
1½kg of sugar	Sh. _____	Sh. **6000**
Total	Cost	Sh. _____

(04 marks)

b) If Sarah had **sh. 20,000**, calculate her change.

(02 marks)

32. a) With the help of a ruler and a pair of compasses only, construct a regular hexagon of side **3.5**cm.

(04 marks)

b) Find the perimeter of the shape.

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