TRIUMPH ACADEMIC ASSESSORS

PRE - PRIMARY LEAVING EXAMINATION 2022

IMPERIAL PRE - PLE SET 3 (THREE)

MATHEMATICS

TIME ALLOWED: 2 HOURS AND 30 MINUTES

	EMIS NUMBER						PERSONAL NO.		
Index number:									

Candidate's name: .....

Candidate's signature: .....

District: ..... Stream: .....

Read the following instructions carefully:

1. This paper comprises **two** sections **A** and **B**. **Section A** has **20 questions** (40 marks) and **section B** has **12 questions** (60 marks)
2. Answer **ALL** questions in this booklet. All working for sections **A** and **B must** be written in the spaces provided with a **very legible** and **neat** handwriting.
3. Use a **pen** with **blue or black ink** for writing and use a **pencil** for drawing and shading diagrams and tables.
4. Avoid **unnecessary** dirt, crosses and **changes of work** in your paper.
5. **No calculators** are allowed in the examination room.
6. **Do not** write in the boxes indicated "**For examiners' use only**".

FOR EXAMINERS' USE ONLY		
Qns	**Marks**	
1 – 5		
6 – 10		
11 – 15		
16 – 20		
21 – 22		
23 – 24		
25 – 26		
27 – 28		
29 – 30		
31 – 32		

SECTION A (40 MARKS)

1. Multiply: $4\,2 \times 3$

2. Solve for P: $3P = -P + 28$

3. Simplify: $4.6 + 3.6 \div 1.5$

4. The proper subsets of Set R are; {k, l}, {k, m}, {l, m}, {k}, {l}, {m} and { }. Find n(R).

5. Find the greatest number of children that can share 24 books and 36 pens equally.

6. Work out the value of h: $2^{\mathbf{2h+1}} \div 2^{\mathbf{5}} = 1$

7. A class teacher recorded the number of pupils who had paid and went for a class trip to Western Uganda using tallies as below;

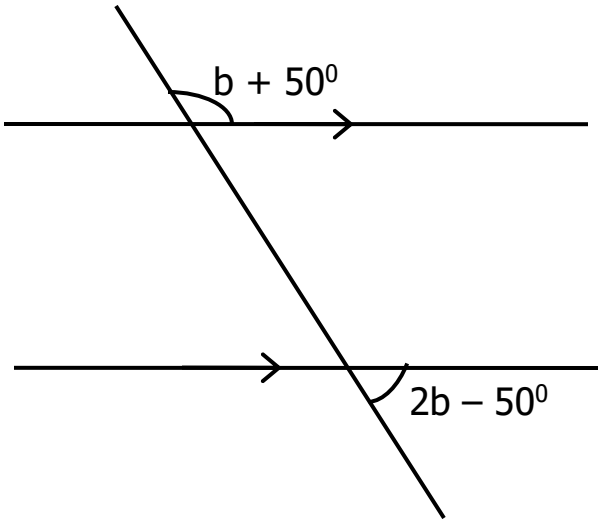
   𝍸 𝍸 𝍸 𝍸 III

   If his class had a total of 40 pupils, draw tallies to represent the children who never went for the trip?

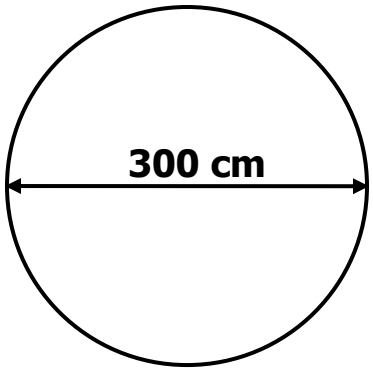
8. During the marking of a test, 2 marks were awarded for each of the correct answers and then 1 mark was deducted for each failed answer. If a pupil who got 5 wrong answers was given 25 marks, how many questions were in the test?

9. A driver started his journey at 9:45 am at a speed of 40 k.p.h. At 12:15 pm, he increased his speed by 5 k.p.h for 2 hours to complete the journey quickly. Find the total distance covered in the whole journey.

10. Find the value of b in degrees.



11. Calculate the area of the circle below. [Take $\frac{314}{100}$ as the pi (π)]

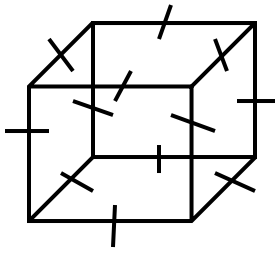


12. A car uses 6 litres of petrol to cover a distance of 102 Km. How many litres of petrol does the car need to cover a journey at a speed of 34 Km/h for 2 hours?

13. Express 108 as a product of its prime factors.

14. The mean of 7 numbers is 13. If five of the numbers are 10, 15, 14, 15 and 9. Find the mean of the other two numbers.

15. Given that the total length of the edges of the cube is 72 cm. Calculate the total area of its faces.



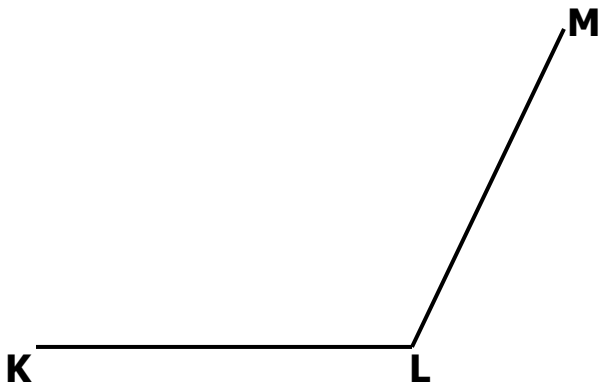
y cm

16. **40 notes** are numbered consecutively from a certain serial number up to AP6473124. Write down the missing serial number of the first note.

17. Convert 72 Km/h into metres per second.

18. Milk of capacity **3.08 litres** was poured into a container whose base area is 154 cm^2. Find the height of the milk in the container.

19. Bisect angle KLM given below.



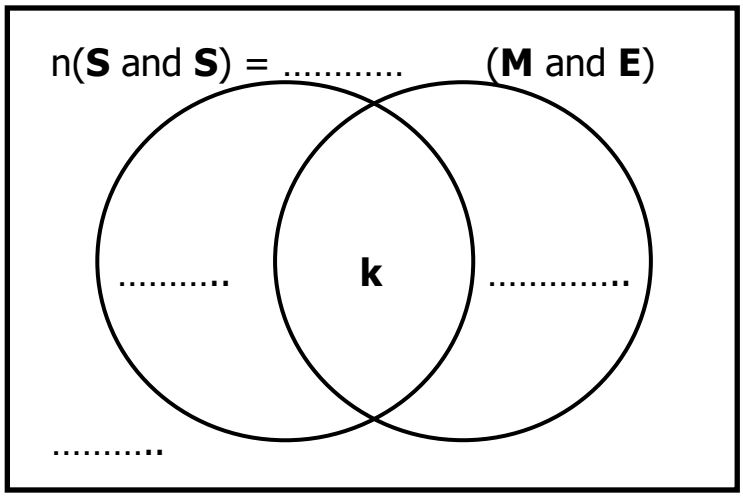
20. Solve the inequality and write down the solution set for k.

$-8 < -2k < 4$

SECTION B (60 MARKS)

21. A class teacher issued out end of year certificates to the outgoing candidates of primary seven after their primary leaving examinations. 30 of them received a certificate each for being good at Science and Social Studies (**S** and **S**), 14 of them received a certificate each for being good at only Mathematics and English (**M** and **E**) but not any other certificate. **k** pupils got both certificates from the teacher while (3**k** + 10) pupils received none of the two certificates but got others for being good in co-curricular activities.

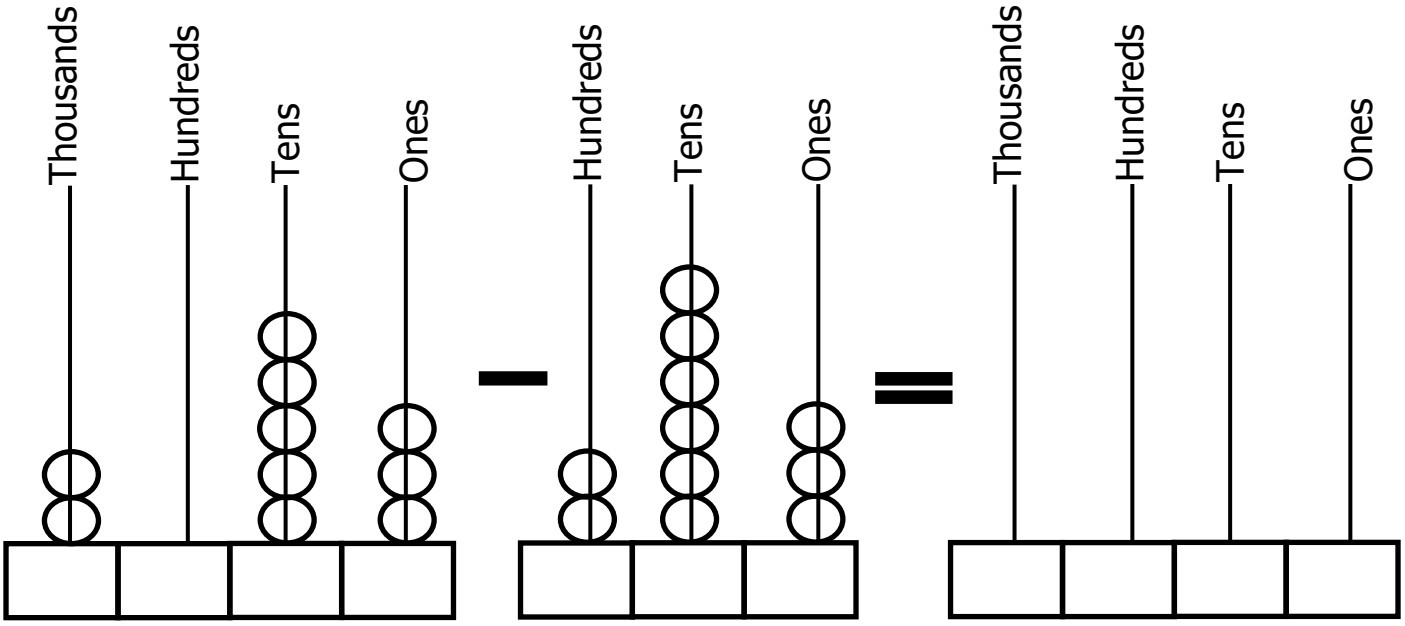
(a) Use the above information to complete the Venn diagram below. *(02 marks)*



(b) Find the value of **k**. *(02 marks)*

(c) What is the probability of choosing a pupil at random who was given a certificate for being good at Mathematics and English? *(02 marks)*

22. (a) Work out the operation shown on the abaci below and show your answer on the third abacus. *(04 marks)*



(b) Write the answer on the third abacus here in words.

(01 mark)

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23. Taibah Junior School has four houses namely; Elgon, Moroto, Mufumbiro and Rwenzori all the pupils are distributed. $\frac{2}{5}$ of the pupils in the school are in Elgon, $\frac{4}{15}$ of them are in Moroto, $\frac{1}{5}$ of them are in Mufumbiro and the rest are in Rwenzori. If there are 290 pupils in both Mufumbiro and Rwenzori houses altogether,

(a) Find the number of pupils in the whole school. *(03 marks)*

(b) How many more pupils are in Elgon than Moroto house? *(02 marks)*

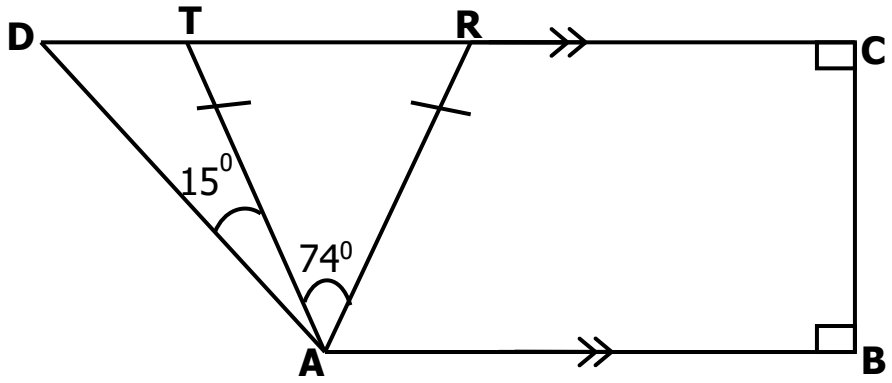
24. Below are the exchange rates at Makanu Forex Bureau in Wandegeya.

CURRENCY	**SYMBOL**	**BUYING PRICE (Ug.sh)**	**SELLING PRICE (Ug.sh)**
United States Dollar	**US**$	Ug.sh. 3,800	Ug.sh. 4,000
Rwandese Franc	**RF**	Ug.sh. 3.5	Ug.sh. 4.0
British Pound Sterling	**BR£**	Ug.sh. 4,300	Ug.sh. 4,500
South African Rand	**SAR**	Ug.sh. 210	Ug.sh. 250

(a) Shanaz has Ug.sh. 6,080,000 and she is travelling to the United States. How much is this in United States Dollars (**US**$)? *(02 marks)*

(b) Tumwebaze is a Rwandese. He travelled to Uganda and boarded an aeroplane at Entebbe airport and continued to South Africa with Rwanda Francs (**RF**) 750,000. How much in South African Rands (**SAR**) did he get? *(03 marks)*

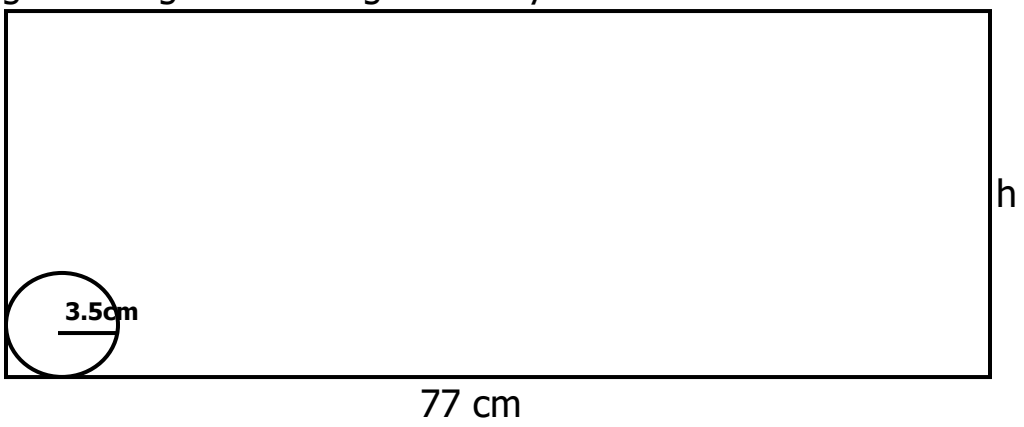
25. The figure below shows a right-angled trapezium ABCD where angle TAR = 74^0 and angles DAT = 15^0.



(a) Find angle RAB. *(02 marks)*

(b) Calculate the value of angle ADC. *(03 marks)*

26. Nalongo made a certain number of circular pancakes of radius 3.5 cm from a rectangular dough measuring 77 cm by h as shown below.



(a) How many pancakes did she cut out along the length? *(02 marks)*

(b) She realized she had cut out 6 pan cakes along the width. Find the width h of the rectangular dough in cm. *(01 mark)*

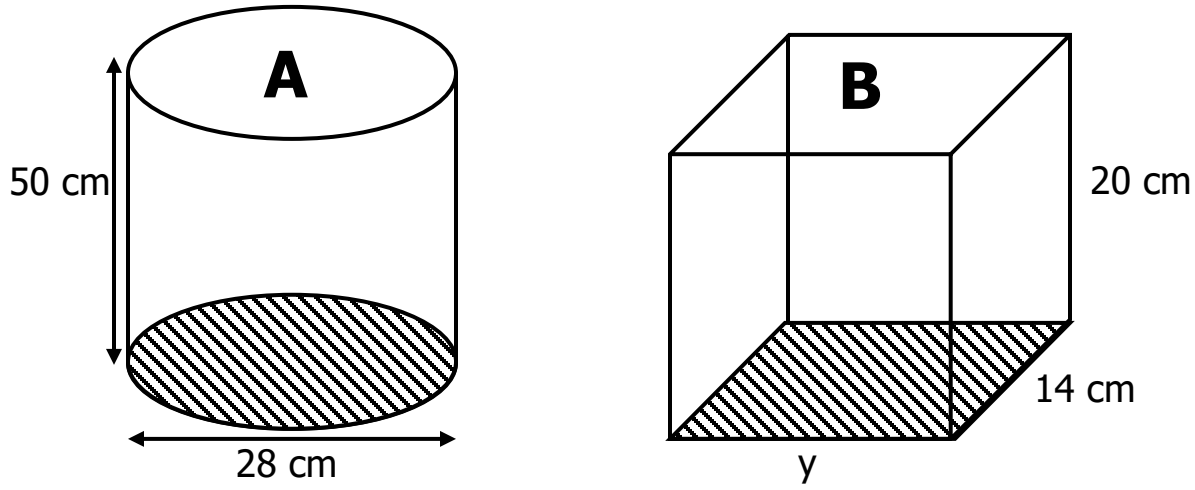
(c) If every two pancakes were sold at sh.500, how much was collected from the sales of all the pan cake cut outs? *(02 marks)*

27. Two taps M and N are connected to a tank of a capacity 4,800 litres. Tap M fills the tank in only 4 hours while tap N empties the same tank in 6 hours.

(a) How many hours will the two taps take to fill the whole tank once opened at a go? *(03 marks)*

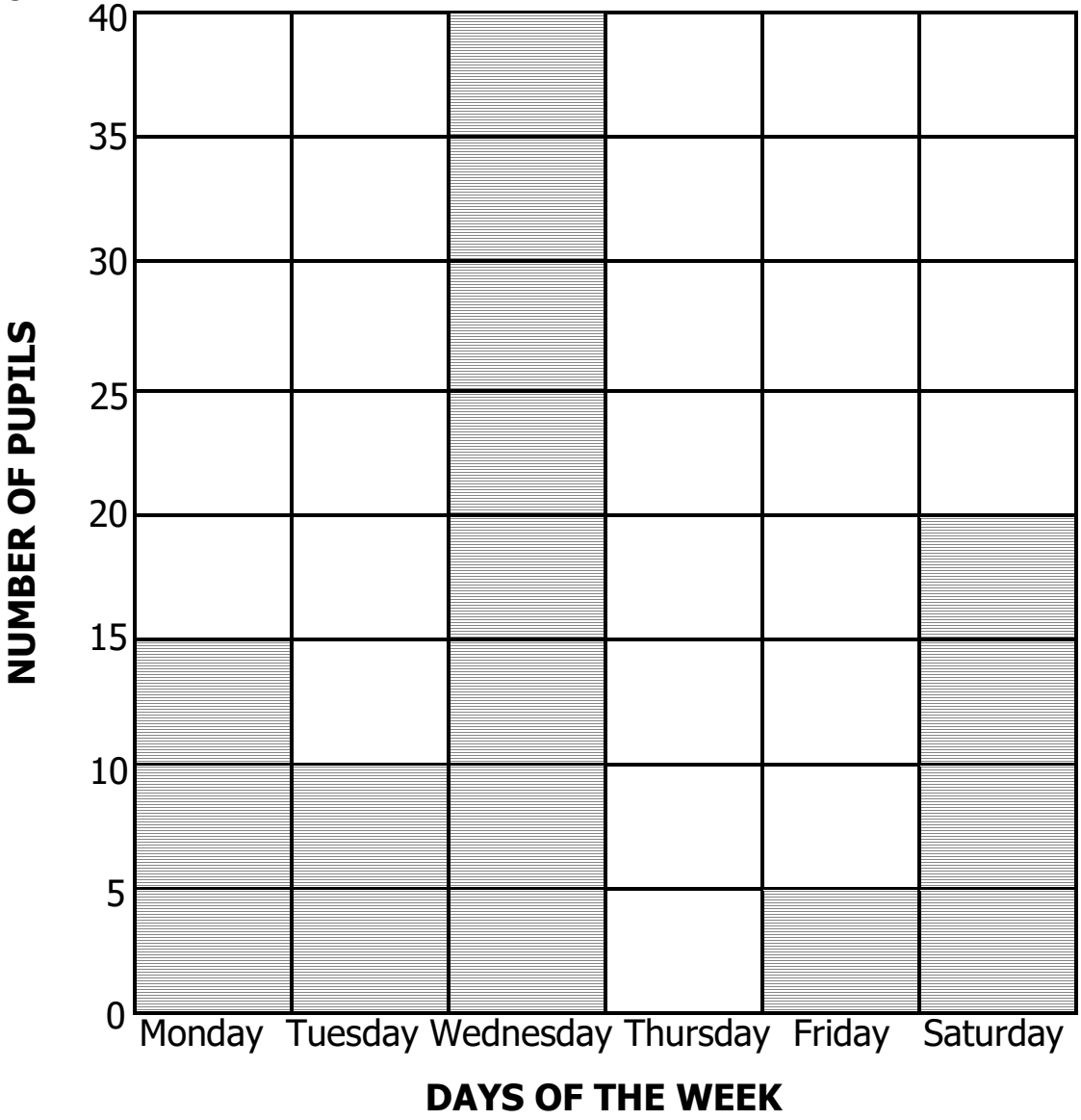
(b) What capacity of water do the two taps fill in the first 5 hours of opening them at a go? *(02 marks)*

28. Container A and container B shown in the figure below have the same base area. Use them to answer the questions that follow.



Find the difference between the volume of container A and that of container B. *(04 marks)*

29. The bar graph below shows absentees of a class of 40 pupils through out a certain week.



(a) Which day had the highest attendance? *(01 mark)*

(b) Which day was a public holiday? *(01 mark)*

(c) Calculate the average attendance of the class throughout the week.
(02 marks)

30. The personal timetable below shows how Pretty spends her Sunday weekend.

TIME TAKEN	**ACTIVITY**
7:00 am to 8:00 am	Preparing for prayers
8:00 am to 10:00 am	Attending prayers at church
10:00 am to 11:00 am	**Taking breakfast snack**
11:00 am to 1:00 pm	Reading books
1:00 pm to 2:00 pm	**Taking lunch meal**
2:00 pm to 3:00 pm	Playing games on phone
3:00 pm to 4:30 pm	Playing netball with the family members
4:30 pm to 6:00 pm	Bathing and refreshing
6:00 pm to 8:00 pm	Reading books
8:00 pm to 9:00 pm	Watching news
9:00 pm to 10:00 pm	**Taking supper meal**
9:00 pm till Monday morning	Sleeping in the bedroom

(a) Which activity is she doing by the time it is 10:30 am? *(01 mark)*

(b) Which activity does she do twice on her Sunday? *(01 mark)*

(c) If she reads 1 page of a book for every 12 minutes, how many pages of a book does she read on her Sunday weekend? *(03 marks)*

31. A mvule tree is the oldest among three trees in a court yard of a home. The mvule tree is 3times as old as the Eucalyptus tree and 23 years older than the fig tree. If the total age of the three trees is 82 years, calculate the age of each tree.

(05 marks)

32. With the help of a pair of compasses, a ruler and a sharp pencil only,

(a) Construct an isosceles trapezium UNEB where the longest side UN = 9 cm, side UB = NE = 5 cm and angle UNE = NUB = 60^0. *(04 marks)*

(b) Drop a perpendicular line from vertex E to meet side UN at a point R.

(01 mark)

(c) Measure height ER = …….. cm *(01 mark)*

THE END