



# PEAK EDUCATION SERVICES – NAKABUGO

## PRE – MOCK EXAMINATIONS SET 1 OF 5

### MATHEMATICS

*Time Allowed: 2 hours 15 minutes*

Random No.						Personal No.		

**Candidate's name:** .....

**Candidate's Signature:** .....

**School Name:** .....

**District Name:** .....

**Read the following instructions carefully:**

- This paper has two sections: **A** and **B**.  
Section **A** has **40** questions and section **B** has **15** questions.
- Answer **all** questions. **All** the working for both Sections **A** and **B** must be shown in the spaces provided.
- All** the working **must** be done using a **blue** or **Black** ball point pen or ink.
- Unnecessary **changes** in your work and Handwriting that cannot be read easily may Lead to **loss of marks**.
- Do not fill anything in the table indicated **'FOR EXAMINERS' USE ONLY'**

FOR EXAMINERS' USE ONLY		
PG.NO.	MARKS	INIT.
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Page 12		
<b>TOTAL</b>		

## SECTION A: 40 MARKS

Answer *all* questions in this section

Questions **1** to **20** carry two marks each

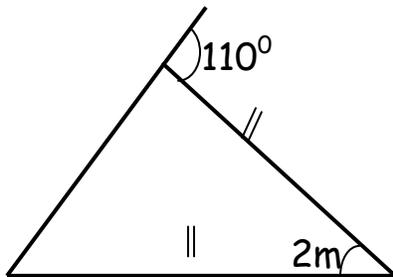
1. Solve:  $2 + 2m = 5$
2. Express 750g as a fraction of 2kg.
3. Atim is aged 19 years. Express her age in Roman numerals.
4. Convert  $2201_{\text{three}}$  to decimal base.
5. Given that  $P = \{\text{all composite numbers between 8 and 19}\}$  and  $Q = \{\text{square numbers between 0 and 15}\}$ , find  $n(K \cap M)$

6. Workout:  $1\frac{1}{3} - 2\frac{3}{4}$

7. The cost of 9 pens is sh. 8,100. How many similar pens can one buy with sh. 10,800?

8. The ratio of poor men to rich men in a village is 3:5. If the village consists of 40 people, how many more rich men than poor men are in that village?

9. Calculate the value of **m** in degrees.

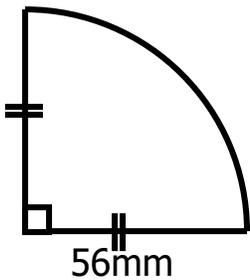


10. Subtract  $x - 4$  from  $3(x + 2)$ .

11. Given that  $a = \sqrt{7}$ ,  $b = 5$  and  $c = \sqrt{2}$ , find the value of  $2a^2 - bc$ .

12. After covering  $\frac{3}{7}$  of his journey, a motorist still had 40km to reach his final destination. How long was the whole journey?

13. Find the perimeter of the figure below (take  $\pi$  as  $\frac{22}{7}$ ).

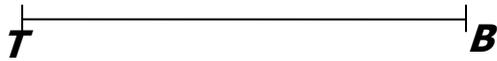


14. A lesson of 45 minutes ended at 3:15p.m. At what time did it begin?

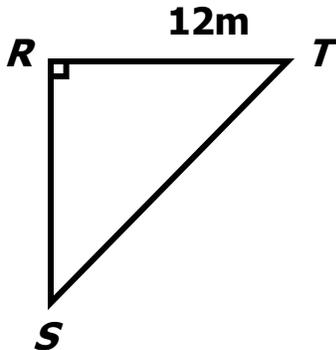
15. Write the value of 9 in 75.09 in words.

16. Drop a perpendicular from point **P** to meet line **TB** at **O**.

• **A**



17. Work out the length of **TS** if the area of the figure below is 30 square metres.



18. A trader deposited sh. 500,000 in Centenary Rural Development Bank at an interest rate of 10% p.a for 6 months. Find the simple interest he earned after that period.

19. 8 men can slash a school compound in nine days. How many more men are needed to slash the same compound in only three days if they work at the same rate?

20. What is the square of seven hundredths?

**SECTION B: 60 MARKS**

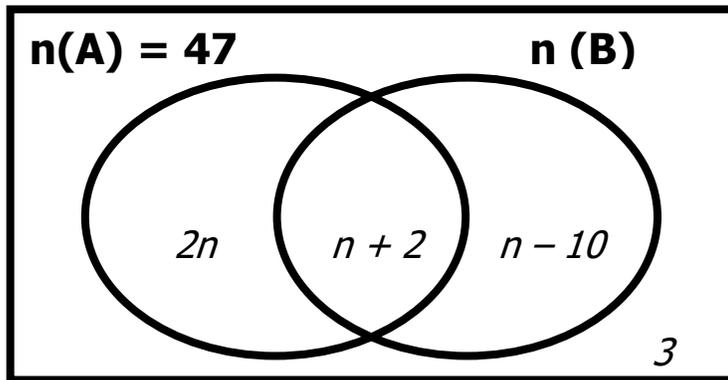
Answer **all** questions in this section

Marks for **each** question are indicated in brackets

21. Agaba is 15 years older than Ashaba. In five years' time, Ashaba will be half as old as Agaba.
- (a) How old is each now? **(04 marks)**
- (b) How old was Agaba fifteen years ago? **(02 marks)**
22. A circular wheel has a radius of 14cm. How many complete revolutions will it make to cover a distance of 8.8km? **(03 marks)**
23. (a) Simplify;  $1\frac{3}{7} + 7\frac{2}{3} \div 3\frac{5}{6}$  **(04 marks)**

- (b) Mr. Musoke bought a car at sh.8,500,000 and sold it to Mrs. Katongole at loss of 10%. Mrs. Katongole sold it to Mr. Ejalu at a profit of 20%. How much money did Mr. Ejalu pay for the car? **(03 marks)**

24. Study the Venn diagram below and answer questions that follow.



- (a) Find the value of  $n$ . **(02 marks)**

- (b) Work out **(01 mark each)**  
(i)  $n(B)'$

(ii)  $n(\varepsilon)$

25. (a) A baby slept from 9:20p.m to 12:45a.m the following day. For how long was it asleep? **(02 marks)**

(b) Express 40m/s to km/hr. **(02 marks)**

(c) Convert 12:25p.m to the 24 hour clock system. **(02 marks)**

26. A farmer in Nakasongola district used her land as follows;

$\frac{1}{4}$  of it to grow tomatoes,  $\frac{1}{2}$  of it to rear animals and the rest for food crops.

Represent the above information on a pie-chart of radius 5cm.

**(03 marks)**

27. (a) Using a pair of compasses, a sharp pencil and a ruler only, construct a parallelogram QPRS and ruler only, where QP = 5.5cm and PR = 4cm and angle SQP =  $60^{\circ}$ .

**(04 marks)**

(b) Measure the length of diagonal QR.

**(01 mark)**

28. (a) A tank of water is  $\frac{3}{4}$  full. When 30 litres of water is drawn from it, it remains  $\frac{7}{12}$  full. Find the full capacity of the tank. **(03 marks)**

29. (a) Work out the product of the next two numbers in the sequence below.  
1, 8, 27, 64, \_\_\_\_\_, \_\_\_\_\_ **(02 marks)**

(b) The median of three consecutive even numbers is  $y$ . Find the numbers if their sum is thirty. **(03 marks)**

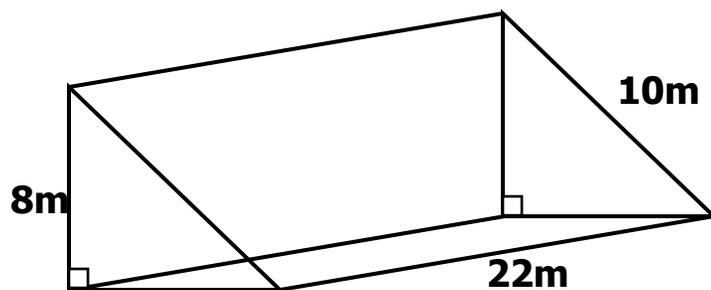
30. (a) Evaluate :  $2.5 - 9.55 + 10.6$  **(02 marks)**

(b) Simplify:  $\frac{2^6 \times 2^9}{2^4 \times 2^7}$

**(02 marks)**

(c) What number has been written in standard form to give  $2.73 \times 10^1$ ? **(02 marks)**

31. Below is a triangular prism. Study it carefully and answer questions about it.



(a) Calculate its volume.

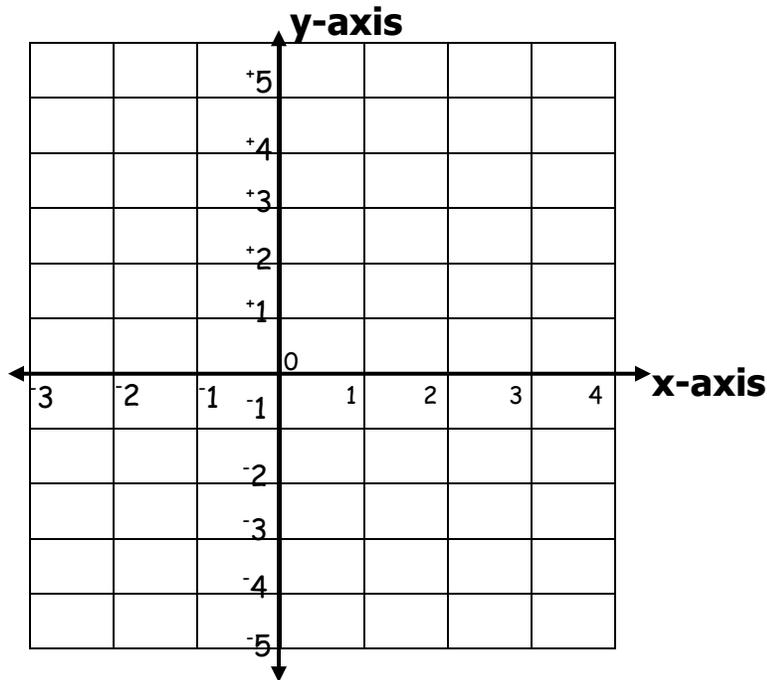
**(02 marks)**

(b) Work out its total surface area.

**(03 marks)**

32. (a) On the grid below, plot these points C(-2, 3) D(1, 3) E(3, -1) and F(-2, -1)

**(04 marks)**



- (b) Join C to D, D to E, E to F and F to C.

- (c) Name the figure formed.

**(01 mark)**

