



DIVINE EDUCATION CENTRE

**PRIMARY SEVEN EXAMINATIONS 2022**

**MATHEMATICS SET 3**

**Time allowed: 2 hours 30 minutes**

**Index No.**

Random No.						Personal No.		

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

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

**School Random No.** .....

**District ID:** .....

**Read the following instructions carefully:**

1. Do not write your **school** or **district name** anywhere on this paper.
2. This paper has two sections **A** and **B**. Section **A** has **20 questions** and **section B** has **12 questions**. This paper has **12 pages** printed altogether.
3. Answer **all** questions. All the working for both sections **A** and **B** must be shown in the spaces provided.
4. **All** working must be done using a **blue** or **black** ball point pen or ink. Any work done in pencil other than graphs and diagrams will **NOT** be marked.
5. **No calculators** are allowed in the examination room.
6. Unnecessary **changes** in your work and handwriting that cannot be easily read may lead to loss of marks.
7. Do not fill anything in the table indicated **"For examiners' use only"** and the boxes inside the question paper.

FOR EXAMINERS'		
USE ONLY		
Qn. No.	MARKS	EXR'S No.
1- 5		
6 -10		
11- 15		
16 - 20		
21 - 22		
23 - 24		
25 - 26		
27 - 28		
29 - 30		
31 - 32		
TOTAL		

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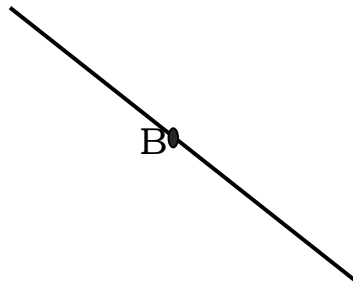
Turn Over

**SECTION A:(40MARKS)**

1. What is the value of m:  $m + 4 = 11$
  
2. Express 125g as a fraction of a kilogram.
  
3. If the cost of one dollar is sh. 800. How many dollars can Mwanje buy with sh. 34,800?
  
4. The perimeter of a semi – circle is 36dm. Calculate its area.
  
5. A bus broke down after covering  $\frac{5}{7}$  of the journey, the remaining distance to complete the journey was 150km. How long was the whole journey?
  
6.  $\frac{1}{4}$  of Grace's salary is equal to  $\frac{2}{3}$  of Andrew's salary. If Andrew earns sh. 300,000. What is Grace's salary?

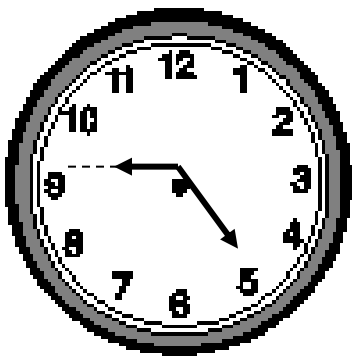
7. An athlete covered 100m in 5 seconds. Calculate the athlete's speed in km/hr.

8. Using a pair of compasses, ruler and pencil, construct an angle of  $75^\circ$  at point B.



9. Simplify:  $0.075 \times 100 + 10 \times 7.5$

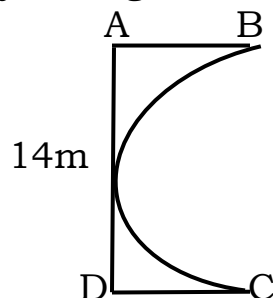
10. By the time Aine went to bed after her supper, her watch was reading as shown in the diagram below .



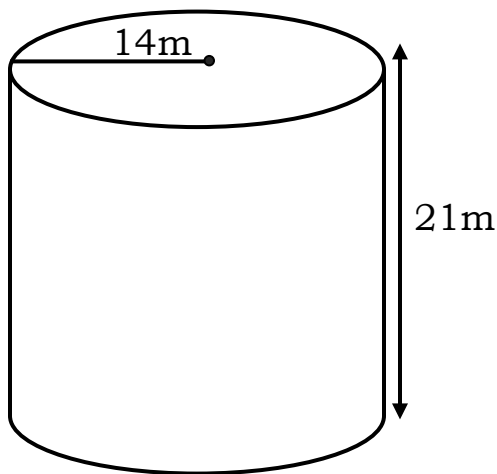
Express this time in a 24 hour clock system

11. Solve for  $y$ :  $2y + 5 = y + 1$
12. Martha's mother is 23 years old and Martha is 4 years old. In how many years will the mother be twice as old as Martha?
13. By selling a pair of shoes at sh. 72,000, a trader realizes a profit of 20%. Calculate the cost price of the shoes.
14. Change  $1011_{\text{two}}$  to base three.
15. Subtract:  $2x - 3$  from  $4x + 1$ .

16. Study the figure below and find the length of arc BC.

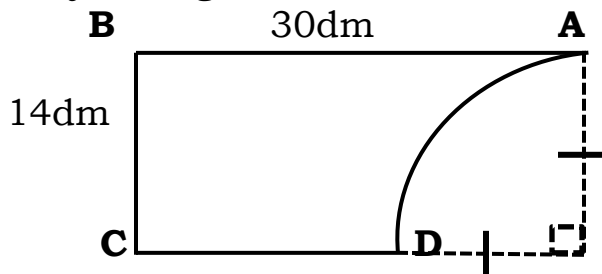


17. An earoplane left Muscow at 8:30pm and arrived at Entebbe airport at 4:15am. How long did the flight take?
18. A tank was  $\frac{7}{12}$  litres full of water, when 800 litres were added, it became  $\frac{5}{6}$  full of water. How many litres of water are in the tank when it is  $\frac{4}{5}$  full of water?
19. Express 0.000263 in scientific form.
20. Find the base area of the cylinder below



**SECTION B (60 MARKS)**

21. Study the figure below and use it to answer the questions that follow.



- a) Find the perimeter of the figure ABCD **(3marks)**
- b) Calculate the area of the figure ABCD. **(3 marks)**
22. A tank has two taps that pour water into it. Tap A turned on alone fills the tank in 20 minutes while Tap B turned on alone, fills the tank in 10 minutes.
- a) How long will the two taps turned on at the same time take to fill the tank? **(2marks)**

- b) If both taps pour 36 litres of water per minute, what amount of water does the tank hold when full? **(2marks)**

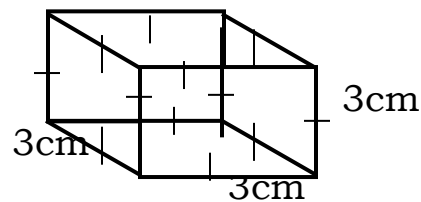
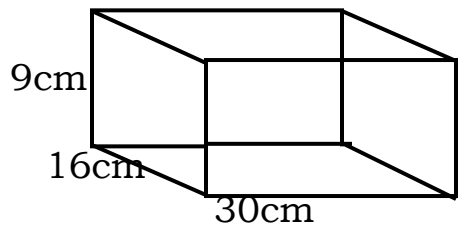
23. a) Express 0.1222... as a Common fraction. **(3marks)**

- b) In a class, there are 10% more boys than girls. If there are 36 girls in the class, find the total number of pupils in the class. **(3marks)**

24. Two dice are tossed at once. Find the chance that they show a sum of 8. **(4 marks)**

25. A girl spent  $\frac{1}{3}$  of her pocket money on Onions,  $\frac{1}{4}$  of the remainder on sweets and saved the rest.  
Using radius of 4cm, draw a pie chart to represent the above information.  
**(5marks)**

26. The diagram below shows a big box which is 30cm long, 16cm wide and 9cm high and a small box which is 3cm long, 3cm wide, 3 cm high.



- a) Find the total number of small boxes that will be packed in the first layer of the big box  
**(2 marks)**
- b) How many layers will fill the big box?  
**(1mark)**
- c) How many small boxes will fill the big box?  
**(1mark)**



d) Find the volume of the space left unoccupied after packing. **(2marks)**

27. a) Using a ruler, a pencil and a pair of compasses only, construct a rhombus ABCD with  $\overline{DC} = 6\text{cm}$  and angle  $ADC = 60^\circ$ . **(3marks)**

b) Measure diagonal AC. **(1mark)**

28. a) Solve for m.  $4m - 6 = 12 - 2m$  **(2marks)**

- b) Our Bursar is four times as old as his son. 4 years ago, their total age was 42 years. How old is the son now? **(2marks)**

29. Jane bought the following items from a shop ;

- $2\frac{1}{2}$  kg of sugar at sh. 5,000 per kg.
- $\frac{1}{2}$  kg of salt at sh.600
- 3 bars of soap at sh. 3500 per bar.
- 2 heaps of tomatoes at sh.1500 per heap.

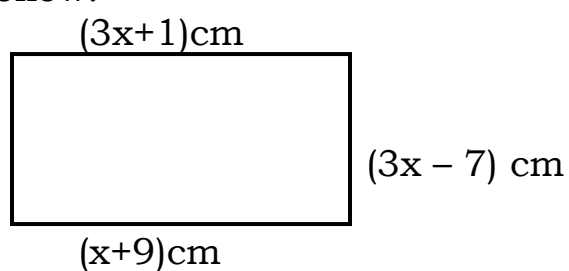
If her balance was shs. 5000, how much did she have at first? **(4marks)**

30. a) Simplify:  $\frac{0.32 \times 1.2}{0.16 \times 0.1}$  **(2marks)**

b) Arrange 0.122, 1.22, 0.012 in ascending order

**(2marks)**

31. The figure below is a rectangle. Use it to answer the questions that follow:-



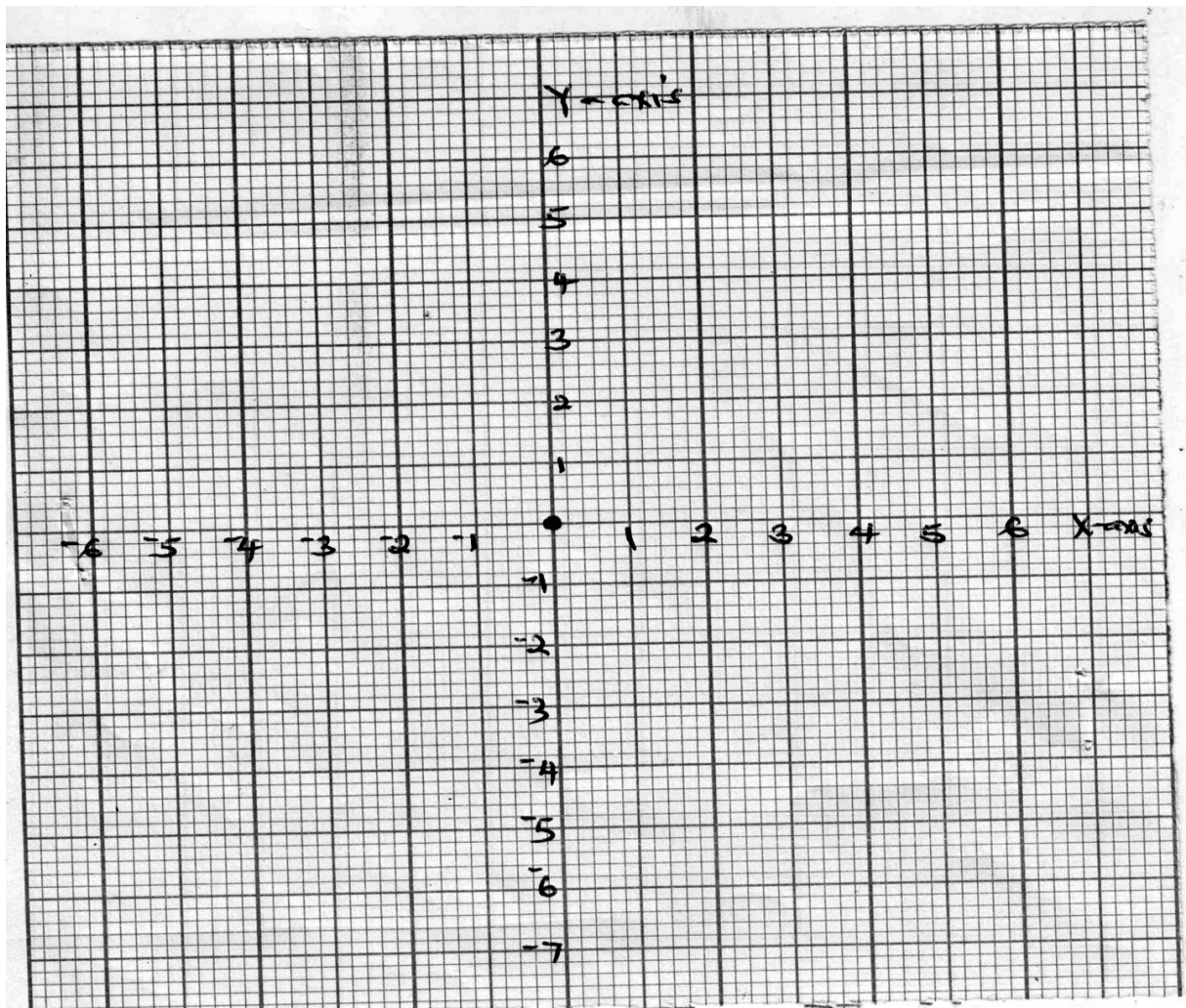
- a) Find the area of the figure above

**(4marks)**

- b) Calculate its perimeter.

**(2marks)**

32. On the grid below;
- i) Plot the points A(0,5), B (-2, 0) C(0, -3) and D (2,0) **(4marks)**
- ii) Join A to B, B to C, C to D. **(1mark)**



- iii) Name the polygon formed. \_\_\_\_\_ **(1mark)**

**END**