

# MATHEMATICS PLE 2015

## CANDIDATE'S INFORMATION

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Signature :

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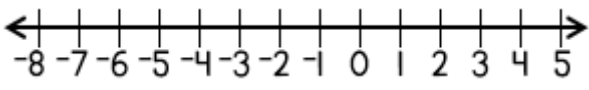
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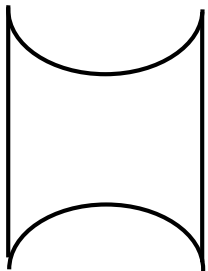
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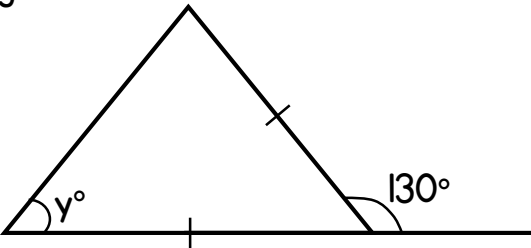
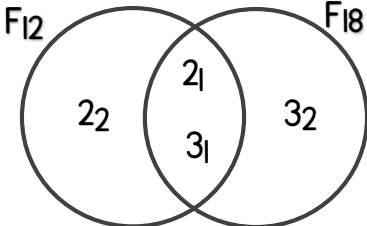
District name :

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## SECTION A: 40 MARKS

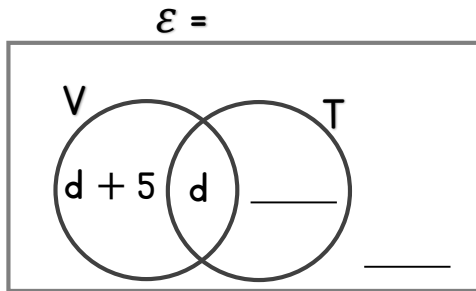
1	Workout: $124 - 45$	2	Write in figures: Eighty thousand, ten
3	Simplify: $18x - 5(3x + 7)$	4	Given that set $K = \{g, m, v, z\}$ , find the number of subsets in set K.
5	Workout $-7 - -3$ on the number line below.  	6	Find the sum of the 5 <sup>th</sup> and the 8 <sup>th</sup> prime numbers.

7	Workout: $\frac{14}{15} \div \frac{2}{5}$	8	A birthday party started at 4:30pm and lasted $2\frac{3}{4}$ hours. At what time did the party end?
9	<p>Show all the lines of folding symmetry in the figure below.</p> 	10	A trader sold a pair of shoes at sh. 32,800 making a profit of sh. 1,200. What was the cost price of the pair of shoes?
11	In a car park, there are 192 cars. The probability that a car picked at random from the park is made in Japan is $\frac{5}{8}$ . How many cars are not made in Japan?	12	How many packets of 200 grams can be got from 2.6 kilograms of salt?
13	Given that $a = -2$ , $b = 3$ and $c = 4$ , find the value of $b(a^2 + c)$	14	Workout: $110 \text{ l}_{\text{two}} + 11 \text{ l}_{\text{two}}$

15	<p>Find the size of angle <math>y</math> in the figure below.</p> 	16	<p>The Venn diagram below shows the prime factors of 12 and 18. Use it to answer the question that follows.</p>  <p>Find the Lowest Common Multiple of 12 and 18.</p>
17	Find the median of the numbers: 8 , 10 , 4 , 1 , 6 and 9	18	Gidudu has goats and sheep in the ratio of 3 : 2. If he has 24 goats, how many sheep does he have?
19	<p>A bucket was <math>\frac{3}{4}</math> full of water. When 4 litres were removed, it became <math>\frac{1}{2}</math> full of water. What is the capacity of the bucket?</p>	20	In a poultry farm, eggs were packed into boxes which hold 144 eggs each. How many boxes of the same size are needed to pack 1,008 eggs?

## SECTION B: 60 MARKS

- 21 In a class, 31 pupils play tennis (T) and  $(d + 5)$  play volleyball (V) only.  $d$  pupils play both games while 3 play neither of the games.
- a. Use the above information to complete the Venn diagram below.



- b. If 27 pupils play volleyball altogether, find the value of  $d$ .

- 22 a. What number has been expanded below?  
 $(6 \times 10^3) + (2 \times 10^1) + (7 \times 10^0) + (3 \times 10^{-2})$

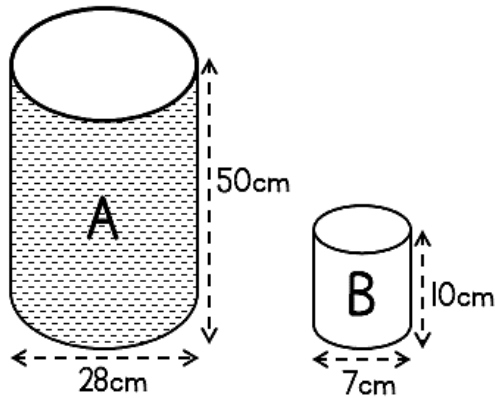
- b. Workout:  $(8.5 \times 14) + (8.5 \times 16)$

- 23 The table below shows the rate at which different currencies were sold and bought in a commercial bank during the month of September. Use it to answer questions that follow.

Currency	Buying in Ug. Shs	Selling in Ug. Shs
1 US dollar (\$)	3,600	3,650
1 Euro €	4,000	4,020
1 Rwandan franc	4.0	5.0

- a. How many Euros did Musa get for Ug. Shs. 603,000?
- b. Amina came from Rwanda with 109,500 Rwandan Francs and exchanged them for US dollars. How many US dollars did she get from the bank?

- 24 Betty filled container A below with drinking water. She served visitors with the water using cups each of size B shown in the diagram.

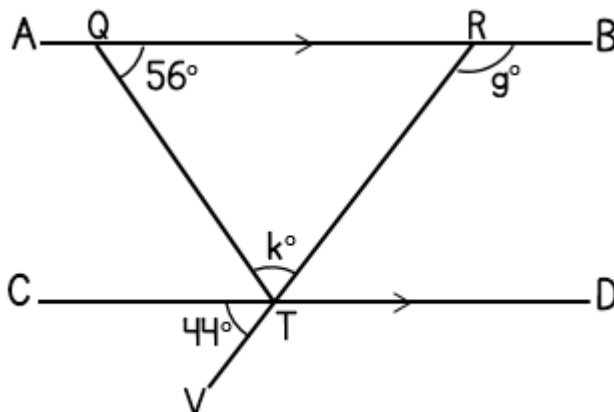


Find the total number of full cups of water she served the visitors. (use  $\pi = \frac{22}{7}$ )

- 25 A fruit seller sold the following number of mangoes in six days.  
60 , 35 , 40 , 28 , 42 and 35

- What is the modal number of mangoes sold?
- Workout the mean number of mangoes sold.
- By the end of the seventh day, the mean number of mangoes sold was 44. How many mangoes were sold on the seventh day?

- 26 In the figure below, line AB is parallel to CD. Angle CTV =  $44^\circ$  and angle TQR =  $56^\circ$ . Study it and use it to answer the questions that follow.



Find the size of;  
a. angle k

b. angle g

27

The table below shows how a motor cyclist travelled from town R through towns Q and S to town P. Study and use it to answer questions that follow.

Town	Arrival	Departure
R		9:00a.m
Q	9:30a.m	9:42a.m
S	10:35a.m	11:10a.m
P	1:30p.m	

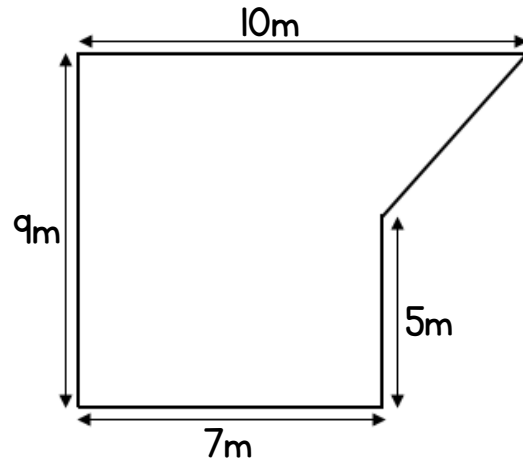
- a. How long did the motorcyclist stay at town S?
- b. Find the time the motor cyclist took to travel from town R to town P
- c. If the distance from town R to town P is 180km, calculate the average speed of the motor cyclist for the whole journey.

28

Madada sold his radio to Aguti at sh. 63,000 making a loss of 10%. Aguti later sold the radio to Chebet at a profit of 15%.

- a. Calculate the amount of money Madada paid for the radio.
- b. For how much money did Aguti sell the radio?

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



a. Calculate the area of the figure.

b. Work out the perimeter of the figure.

30 Two taps F and E are connected to a water tank. Tap F can fill the tank in 2 hours while tap E can empty it in 3 hours. One day when the tank was  $\frac{1}{3}$  full of water, the taps were opened at the same time. How long did it take to fill the tank?

- 31 A geometry set costs a half as much as a book. A book costs sh.600 more than a fountain pen. If the total cost of the three items is sh.6,900. Find the cost of a geometry set.
- 32 A plane flew from airport K to airport T on a bearing of  $120^\circ$ . The distance between K and T is 600km. It then left airport T for airport R on a bearing of  $210^\circ$ . The distance between T and R is 500km.
- Sketch the journey made by the plane.
  - Using a scale of 1cm to represent 100km, draw an accurate diagram to show the journey made by the plane.
  - Find the bearing of airport R from airport K.