MATHEMATICS PLE 2018

SECTION A: 40 MARKS
Questions 1 to 20 carry 2 marks each

1	Workout: 36 ÷ 3	**2**	Write in figures: Nine thousand, thirty six
3	Given that P = {a, b, c, d, e, f, g} and Q = {b, a, f, e, h}. Find n(P∪Q)	**4**	A teacher counted pupils without school uniform in a class and tallied them as follows: ₶₶ ₶₶ ₶₶ ₶₶ |||| How many pupils were without school uniform?
5	The clock face below shows time in the afternoon. Write the time shown in 24-hour clock.	**6**	Simplify: $5k - 2(3 - k)$
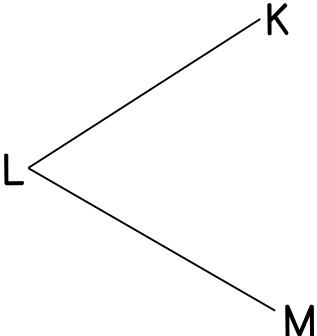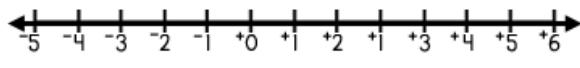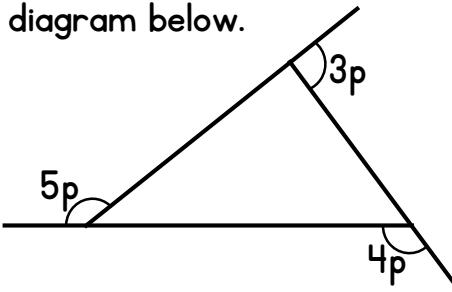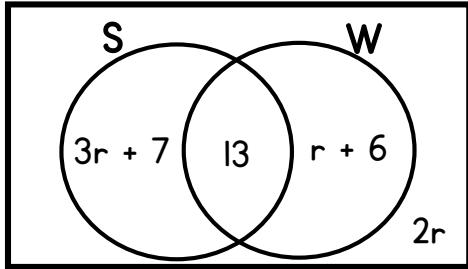
7	A car uses 7 litres of petrol to cover 28 kilometres. How many litres of petrol can it use to cover 64 kilometres?	8	Okia bought 4 packets of washing powder each weighing 750 grams. Find the weight of the washing powder Okia bought in Kilograms.
9	Use a protractor to measure the size of angle KLM below. K L M Angle KLM = _____	10	Find the next number in the sequence: 1 , 2 , 10 , 37 , _____
11	Workout: (49 x 39) + (61 x 49)	12	Round off 796 to the nearest tens.
13	Workout: $^-5$ + $^+2$ on the number line below.	14	Martha drove from town A to town B at a speed of 72km per hour. Town A is 90km away from town B. Calculate the time she took to reach town B.

15	The following heights of six children were recorded at a health centre: 53cm, 64cm, 59cm, 51cm, 63cm and 61cm. Find the median height of the children.	16	Given that 1 US dollar ($) costs Uganda shillings (Ug.sh) 3,672 and 1 Kenya shilling (K.sh) costs Ug.sh 36, find the cost of 1 US dollar in Kenya shillings.
17	Find the value of p in degrees in the diagram below.	18	The taxi fare from Kampala to Mukono was raised by $16\frac{2}{3}\%$. The old fare was sh.3,000. Find the new fare taxi fare.
19	Solve the inequality: $3 - 2m < 15$	20	Bottles of 300 millilitres (ml) were used to fill a nine litre bucket with water. Find the number of full 300ml bottles that were used.

SECTION B: 60 MARKS

21	At a party, guests were served with soda (S) and mineral water (W) as shown in the Venn diagram below. Study and use it to answer the questions that follow.

a. If 32 guests were served with soda,
(i). find the value of r

(ii). find the total number of guests who attended the party.

b. Find the probability that a guest picked at random did not take any drink.

22

a. Express $\dfrac{4}{15}$ as a recurring decimal.

b. Simplify: $\dfrac{4}{5} \times \dfrac{3}{7} \div \dfrac{9}{14} + 2\dfrac{7}{15}$

23

a. Write the place value of 2 and 1 in 201_{three}

b. Workout: $42_{five} \times 21_{five}$

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24 The sum of the lengths of all the edges of the prism below is 96cm.

a. Find the length of edge L
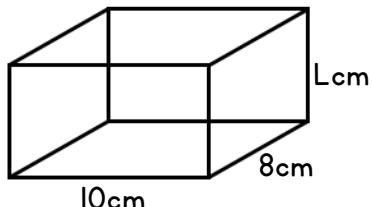
b. Calculate the volume of the prism.

10cm   8cm   Lcm

| 25 | Study and complete Mukasa's shopping table below: |

Item	Quantity	Unit cost	Amount
Sugar	3kg	sh _____ per kg	sh. 14,400
Rice	_____ kg	sh. 5,000 per kg	sh. 2,500
Milk	250 ml	sh. 3,000 per litre	sh. _____
Biscuits	2 packets	sh _____ per packet	sh. _____
Total expenditure			sh. 29,650

| 26 | a. Using a pair of compasses and a ruler only, construct a rhombus UVXY whose diagonals are 14cm and 10cm.

b. Measure the length VX. _____ cm |

| 27 | The average weight of four boys is 56kg. When two other boys join the group, the average weight becomes 52kg. The sixth boy is 8kg heavier than the fifth boy. Find the weight of the sixth boy. |

| 28	a. The interior angle of a regular polygon is 108° more than the exterior angle. How many sides has the polygon?
	b. In the figure below, find the size of angle z.
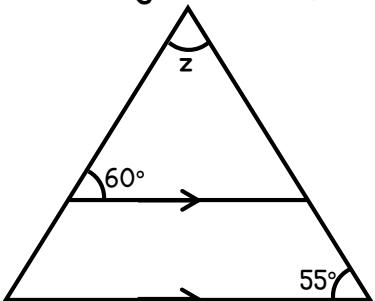
29	Joyce, Peter and Hannah shared pencils in the ratio 3:5:7 respectively.
	    a. If Hannah got 12 more pencils than Joyce, how many pencils did they share altogether?
	
	    b. Find the number of pencils Peter got.

30	Kizito is 38 years old and his sister is 24 years old.
	    a. How many years ago was Kizito three times as old as his sister?
	
	    b. How old was Kizito's sister then?

For question 28b, the figure shows a triangle with angle z at the top vertex, 60° at the lower-left vertex, and 55° at the lower-right vertex. Two parallel lines (marked with arrows) cross the triangle.

31	The figure below shows a rectangular sheet of metal. The sheet is curved to form the wall of a cylindrical tank whose height is 100cm.

100cm

220cm
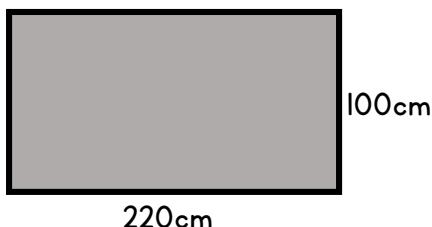
a. Find the diameter of the tank formed. $(\pi = \frac{22}{7})$

b. Calculate the;
   (i). area of the sheet needed to cover the base of the tank.

   (ii). Capacity of the tank.

32	Town M is 150km from town G. A motorcyclist started a journey from town M at 10:30am. He was travelling at a speed of 25km/hr for 2 hours. He rested for 30 minutes and then continued at a speed of 50km/hr for the rest of the journey to town G.

a. Represent the motorcyclist's journey on the graph below.

DISTANCE IN KM

160km
140km
120km
100km
80km
60km
40km
20km

10:00am 11:00am 12:00noon 1:00pm 2:00pm 3:00pm 4:00pm 5:00pm

TIME IN HOURS
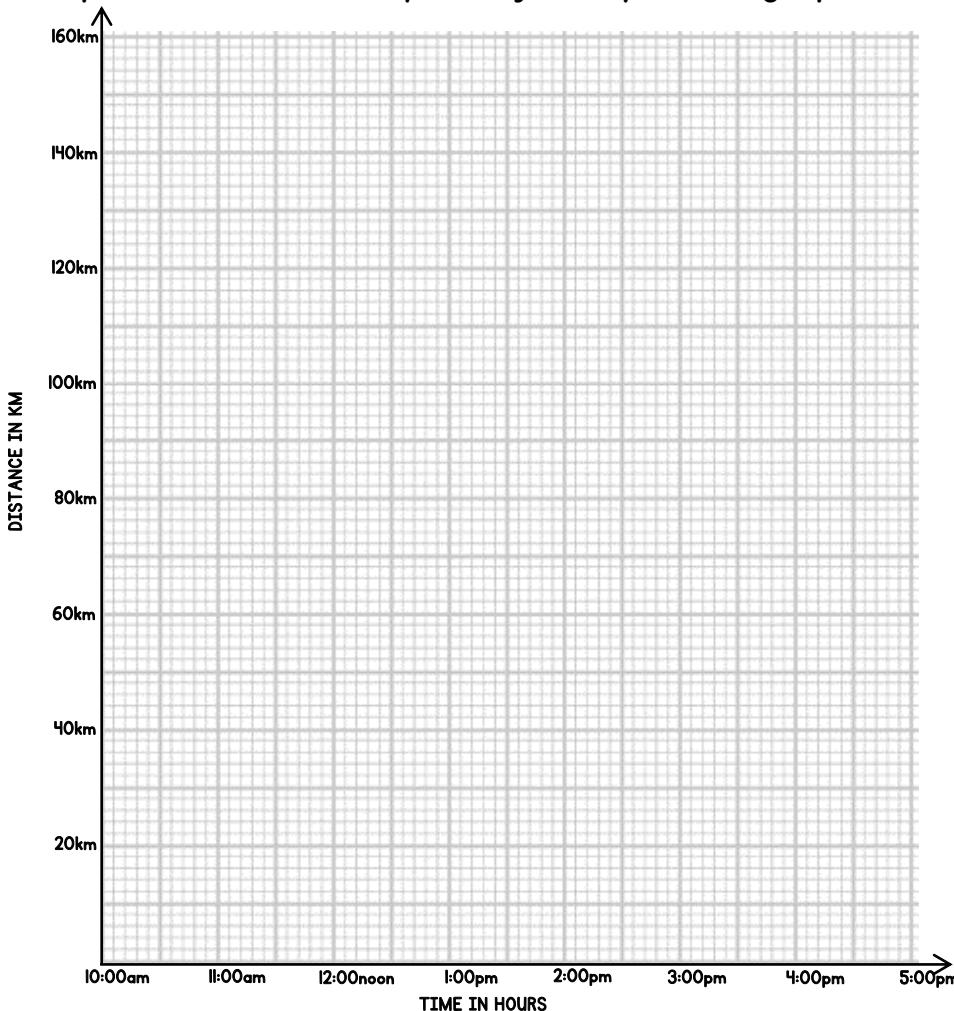
b. At what time did the motorcyclist reach town G?