MATHEMATICS PLE 2017

CANDIDATE'S INFORMATION

Index number : ⬚⬚⬚⬚⬚⬚⬚⬚⬚

Name : _____

Signature : _____

School name : _____

District name : _____

SECTION A: 40 MARKS

1 Workout: 32×3	**2** Write 650,019 in words.
3 Workout: $2 - 5$ (finite 7)	**4** Find the next number in the sequence: $^-11$, $^-8$, $^-5$, $^-2$, _____
5 Solve the equation: $7n + 2 = 23$	**6** Given that set N = {c , t , p}, list all the subsets in N.

7	Find the number which has been expanded below: $(3 \times 10^2) + (5 \times 10^{-1})$	8	The profit on a shirt sold at sh 7,900 was sh 2,100. Calculate the cost price of the shirt.
9	Change 10 square metres into square centimetres.	10	Write 9:30a.m in the 24 hour clock.
11	Workout: $1\frac{1}{2} - \frac{2}{3}$	12	Find the value of the digit in the ten thousands place in the number 850634.

13	A box contains 20 pens. 10 are blue, 7 are red and the rest black. A pen is picked at random from the box. Find the probability that it is a black pen.	14	The diagram below shows the positions of two towns L and M. Use it to answer the questions that follow. Workout the bearing of town L from town M
15	Using a pair of compasses, a ruler and a pencil only, construct an angle of 150° in the space below.	16	Given that $a = 3$ and $b = {}^-2$, find the value of $a^2 - b^3$
17	Sixty six poles are fixed in a straight line along one side of a road. The poles are fixed at intervals of 10 metres. Calculate the length of the road.	18	A house can be built by 3 men in 20 days. How many men working at the same rate can build the same house in 12 days?
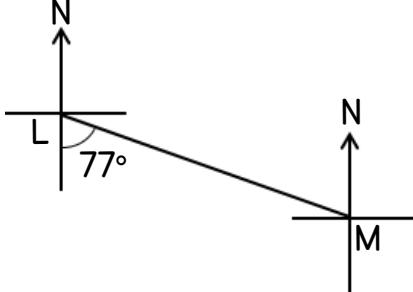
19	The graph below shows the number of pupils present in a class of 40 pupils in a certain week. Study it and answer the questions that follow.	20	Find the least number of sweets when divided among 8 boys or 6 girls equally, leaves 2 sweets as remainder.

Days of the week
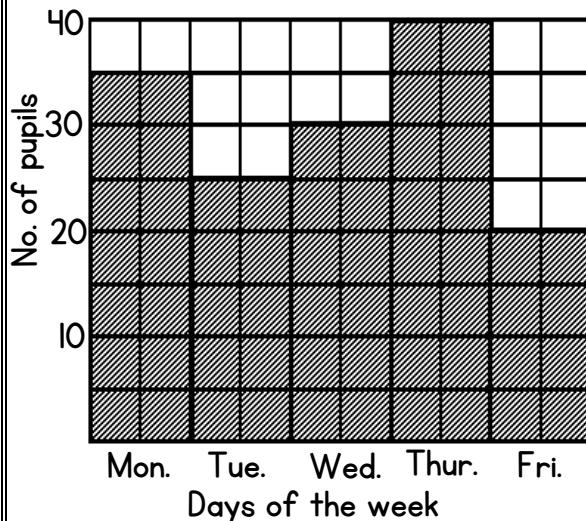
Find the number of pupils who were absent on Tuesday.

SECTION B: 60 MARKS

21 a. Workout:

$$\begin{array}{r} 3 \quad 3 \quad 4_{\text{five}} \\ + \ 1 \quad 2 \quad 3_{\text{five}} \\ \hline \end{array}$$

b. Given that $34_t = 112_{\text{four}}$. Find the value of t.

22	Akot went to the market and bought the following items:

22 | Akot went to the market and bought the following items:

   3 litres of milk at sh. 2,400 per litre

   250g of salt at sh. 2,000 per kg

   18 oranges at sh. 1,500 for every 6 oranges.

   a. Calculate the total cost of the items.

   b. Akot paid sh 12,000 for the items. What discount was she given?

23 | In a class, 32 pupils play football (F) only, g play both volleyball (V) and football, $(2g - 10)$ play volleyball but not football while $(g - 2)$ play neither of the two games.

   a. Complete the Venn diagram below using the above information.
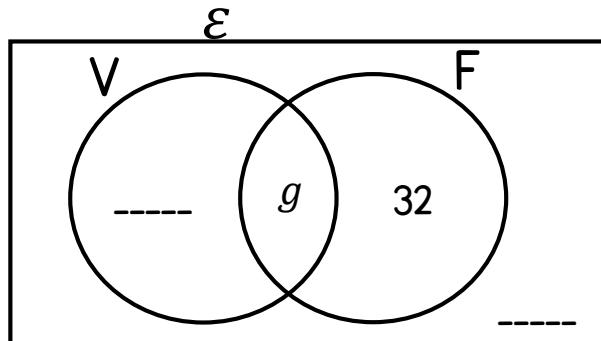
   b. Given that 62 pupils play one game only, find the value of g

   c. Calculate the number of pupils in the class.

| 24	A school bus taking pupils to a Game park covered 75% of its journey in $1\frac{1}{2}$ hours. The bus travelled at a steady speed of 80 kilometres per hour. Find how far the school is from the game park.
25	a. Solve the equation: $\frac{3}{5}n + 6 = 2 + n$ b. Solve the inequality: $9 - 2k > k + 3$
26	In the diagram below, line DH is parallel to FE. Angle ACB = 75° and angle CBE = 135°. Angle FAD is twice angle DAC. Study the diagram and use it to answer the questions that follow. a. Calculate the size of angle DAC b. Find the size of angle ADC.
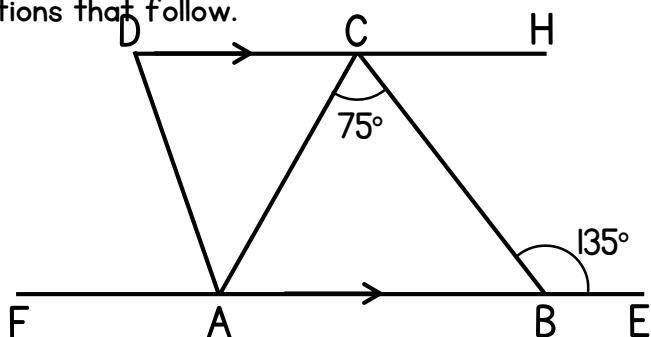
27	Arafat deposited money in a bank which offers a simple interest rate of $2\frac{1}{2}\%$ per year. After 9 months, his account had an amount of sh. 163,000. Calculate the money Arafat deposited in the bank.
28	a. Using a ruler, a pencil and a pair of compasses only, construct a quadrilateral ABCD where line AB = 7cm, angle ABC = BAD = 60° and AD = BC = 3.5cm. b. Measure the length DC. _____ cm

| 29	The total mass of tins of honey in a box is 3.25kg. The mass of each tin is 250g. Find the number of tins in the box.
30	The diagram below shows a square BCDE enclosed in a circle with centre O and radius 14cm. Parts of the circle are shaded as shown. Study the diagram and use it to answer the questions that follow. a. Calculate the area of the circle. $\left(Use\ \pi = \frac{22}{7}\right)$ b. Find the area of the shaded part.
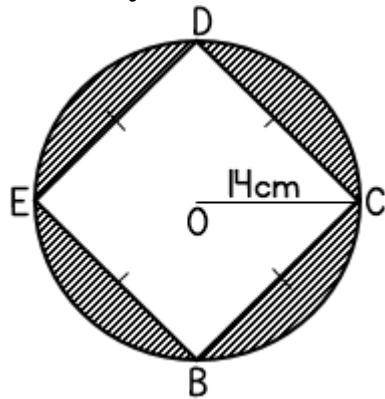
31	In a class, $\frac{1}{5}$ of the girls are borders while $\frac{1}{3}$ of the boys are day scholars. The percentage of the girls in the class is 60%. The class has 10 boys who are day scholars.
	a. How many pupils are in the class?
	b. Find the number of girls who are borders.
32	Study the coordinate graph below and use it to answer the questions that follow.
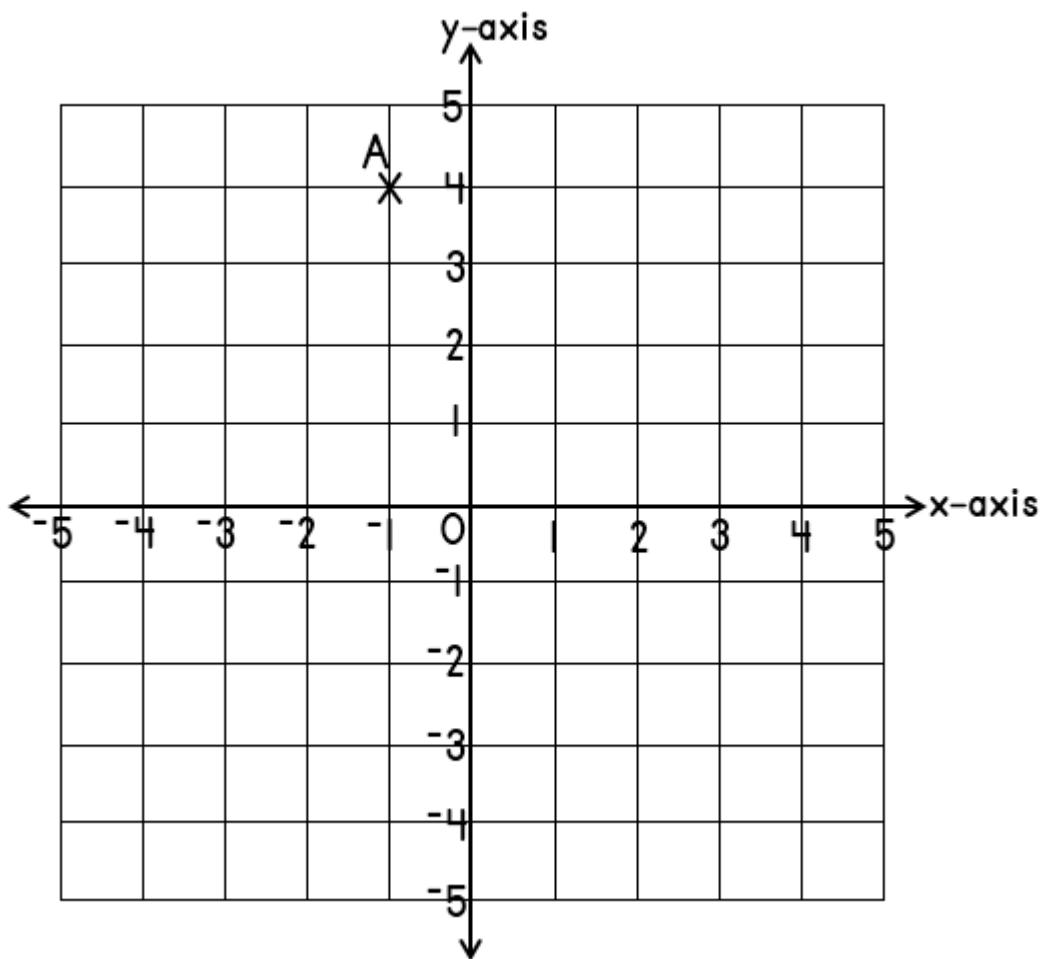
a. Write the coordinates of point A.

b. Plot the points B(⁺2, ⁺2) and C(⁻1, ⁻4) on the graph.
c. Join points A to B and B to C.
d. Locate a point D on the graph, join it to A and C such that ABCD is a kite.