MATHEMATICS PLE 2006

CANDIDATE'S INFORMATION

Index number : ☐☐☐☐☐☐☐☐☐

Name : _____

Signature : _____

School name : _____

District name : _____

SECTION A: 40 MARKS

1. Workout: $\begin{array}{r} 5\ \ 6 \\ -\ 4\ \ 5 \\ \hline \ \ \ \ \ \ \ \ \\ \hline \end{array}$	2. Write in figures: One thousand, one
3. Simplify: $m + 2m + 3m$	4. Workout: $\dfrac{2}{3} \times \dfrac{9}{10}$
5. Round off 23.47 to the nearest whole number.	6. Write 29 in Roman numerals.

A

7	Shade $\frac{2}{5}$ of the following diagram.	8	Workout:

8 Workout:

$$\begin{array}{r} 1 \quad 0_{\text{two}} \\ +\ 1 \quad 1_{\text{two}} \\ \hline \end{array}$$

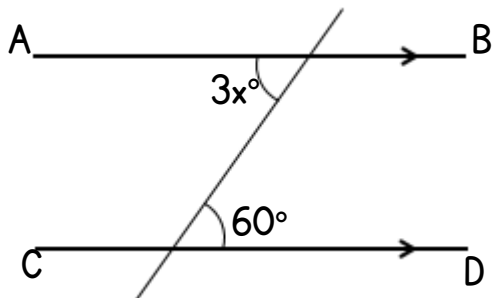| 9	Find the next number in the sequence: 21 , 20 , 18 , 15 , 11 , _____	10	Workout: $^-8 - {}^-3$

11	Change $\frac{1}{5}$ kg to grams	12	Solve: $2x + 7 = 11$

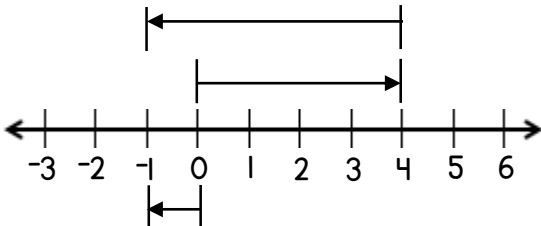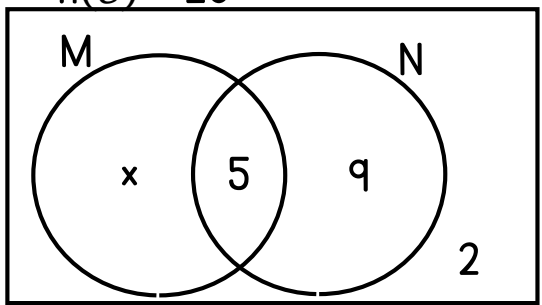13 In the figure below, AB is parallel to CD. Find the value of x.
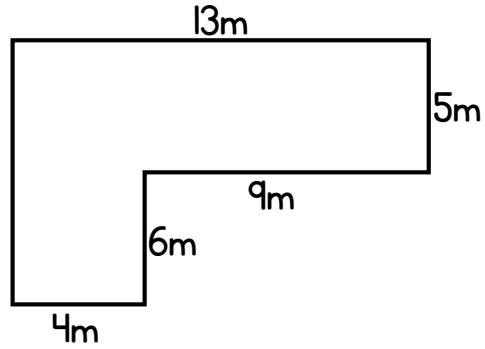

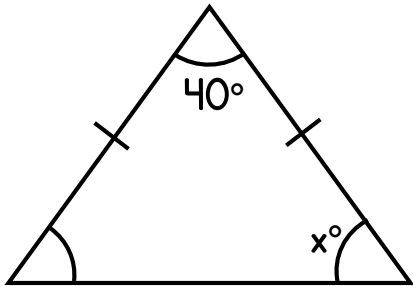14 A pupil scored the following marks in Mathematics tests:
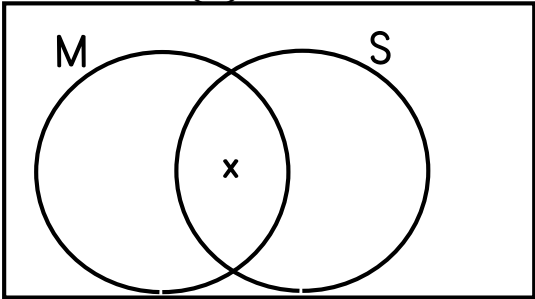   46 , 71 , 30 , 65 , 40 , 50 , 69.
Find the median mark.

15	The area of a square room is $12\frac{1}{4}m^2$. Find the length of one of its sides.	16	A basket contains 3 bad eggs and 6 good ones. If the eggs in the basket are mixed, what is the probability of picking a bad egg from the basket?
17	A baby slept at 8:30am. If the baby slept for 2 hours and 45 minutes, at what time did the baby wake up?	18	Use the figure to write the Mathematical statement shown.

18 figure:

19 Venn diagram:

Use the Venn diagram below to find the value of x.

$n(\varepsilon) = 20$

20 figure:

Find the perimeter of the figure below.

21	Given that set A = {0, 1, 2, 3, 5, 7} And set B ={0, 4, 6, 7, 9}, find n(A∩B)	22	Abdul is x years old. He is 5 years younger than Madina. How old is Madina?
23	Given that $a = {}^-6, b = 3, c = {}^-2$ and $d = 1$. Find: $\dfrac{ad}{bc}$	24	Using a ruler, a pencil and a pair of compasses only, construct an angle of 120° in the space provided below.
25	If 4 books cost sh. 36,000, how much will 6 books of the same type cost?	26	The figure below is an isosceles triangle. Find the size of angle x.

27	Find the difference between the value of 9 and the place value of 7 in the number 9473.	28	In a school of 600 pupils, the ratio of boys to girls is 1:2. What is the number of girls in the school?
29	Mary deposited sh. 60,000 in a bank which gives a simple interest rate of 7% per year. Find her interest after 6 months.	30	The price of a shirt was increased by 10%. If the new price is sh. 44,000, find the old price.

SECTION B: 60 MARKS

31 | In a Primary seven class of 50 pupils, 27 like mathematics (M), 22 like science (S), x pupils like both mathematics and science and 3 pupils do not like any of the two subjects.

   a. Represent the above information on a Venn diagram given below.

$$n(\varepsilon) = 50$$

M   S

x

   b. Find the number of pupils who like only one subject.

| 32 | Jane bought the following items from the market.
| | ➢ 3kg of sugar at shs. 1,400 per kg.
| | ➢ $1\frac{1}{2}$ kg of rice at shs. 1,200 per kg.
| | ➢ $1\frac{1}{2}$ litres of paraffin at shs. 900 per litre.
| | ➢ 8 oranges at shs. 50 per orange.
| | If Jane remained with only shs. 250, find the total amount of money she had at first. |

| 33 | A primary school has a population of 1,080 pupils. Of these, $\frac{3}{4}$ are girls and $\frac{1}{5}$ of the boys are in upper primary classes.
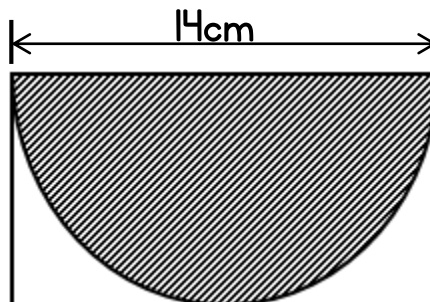| | a. Find the total number of boys in upper primary classes.
| | b. Express the number of boys in lower primary classes as a percentage of the whole school population. |

| 34 | A milk seller has 36 litres of milk. He sells milk using a container measuring 6cm by 10cm by 6cm at shs. 150 per full container. How much money does he get after selling all the milk? |

35	John and his young daughter travelled from Kampala to Nairobi by bus. John paid K.shs. 1,500 and the daughter paid K.shs. 750.
	The exchange rate was: 1 Kenya shilling (K.shs.) = 24 Uganda shillings (U.shs.)
	   a. Workout the bus fare in Uganda shillings which each of them paid.
	
	   b. If John had Ug. Shs. 102,000 at the beginning of the journey, what was his balance in Kenya shillings after paying the bus fares for himself and the daughter?

36	The figure below shows a semi-circle enclosed in a rectangle. Use it to answer the questions that follow.
	
	14cm
	
	   a. Find the area of the rectangle.
	
	   b. Workout the area of the un-shaded part. $\left(use\ \pi = \frac{22}{7}\right)$

37	The head teacher drove from school to town P for 3 hours at a steady speed of 60km per hour. He left town P at 11a.m and drove back to school along the same road at a steady speed of 90km per hour.
	a. At what time did the head teacher arrive at the school?
	b. Workout the head teacher's average speed for the whole journey.
38	Three pupils are aged (2x + 5), (3x – 10) and (x + 3) years. Their total age is 34 years.
	a. Find the value of x.
	b. How old is the youngest pupil?

39	a. Solve: $\dfrac{m+2}{2} = \dfrac{4m-4}{11}$	b. Solve: $\dfrac{2x+4}{5} - 6 = 0$

| 40 | The bearing of town B from town A is 120° and town B is 4 km from A. The bearing of town C from B is 60° and town C is 5 km from B.

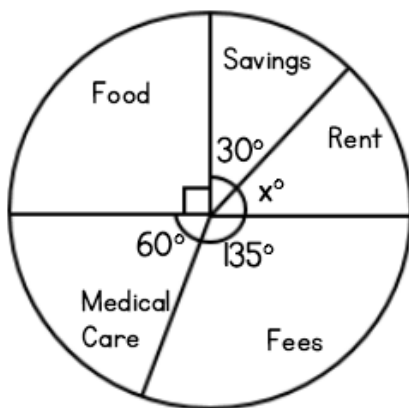   a. Draw an accurate diagram showing the three towns. (Use a scale of: 1cm = 1km)

    b. Find the shortest distance between town A and C in kilometres.

41	a. Using a ruler, a pencil and a pair of compasses only, construct a triangle KLM in which KM = 6.5cm, angle KML = 45° and angle LKM = 60°.
	b. Measure ML
42	The Pie chart below shows how Kalinda spends his monthly salary.

42. The Pie chart below shows how Kalinda spends his monthly salary.

a. If he spends shs. 15,000 on rent, find his salary.

a. Workout the amount of money he spends on;
   i. Food   ii. Medical care