MATHEMATICS PLE 2007

CANDIDATE'S INFORMATION

Index number : | | | | | | | | | |

Name : _____

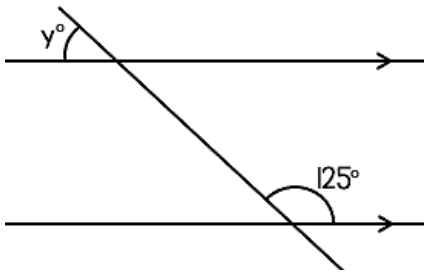
Signature : _____

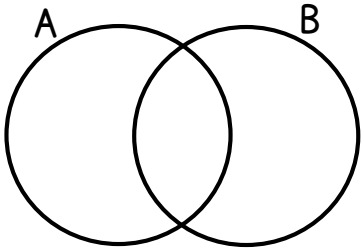
School name : _____

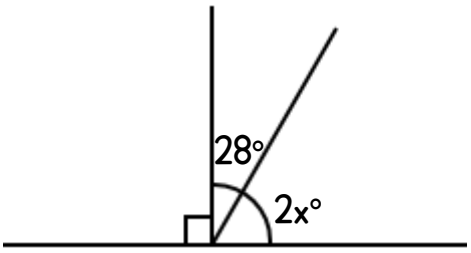
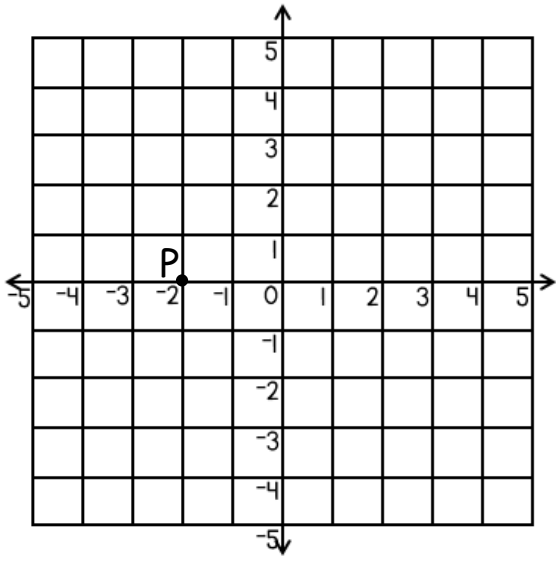
District name : _____

SECTION A: 40 MARKS

1	Workout: 4 3 × 2 [ ]	2	Write in figures: One thousand, thirteen.
3	Simplify: $6x - 5m + 3m - 4x$	4	Workout: $t^6 \div t^2$
5	Solve: $3 - x = 2x$	6	Simplify: $^-5 - {}^+5$

7	Write 99 in Roman numerals.	8	Find the value of y in the figure below. 
9	Find the next number in the sequence: 2 , 5 , 7 , 10 , 12 , _____	10	Using a ruler, a pencil and a pair of compasses only, construct an angle of 90° in the space provided below.
11	Express 36 as a percentage of 80.	12	Find the median of the following numbers: 3 , 0 , 5 , 4 , 2
13	Given that $x = 3, y = 4$ and $z = 6$, find the value of $\frac{xy}{z}$	14	Change 12,400 metres to kilometres

15	The radius of a wheel of a bicycle is 35cm. find the circumference of the wheel. $\left(use\ \pi = \frac{22}{7}\right)$	16	Change 11010_{two} to base ten.
17	Find the sum of the values of the digits 3 and 5 in the number 3958.	18	The first half of a football match ended at5:25p.m after being played for 45 minutes. At what time did the match start?
19	In the diagram below, shade the region that represents only the members of set B.  	20	Simplify: $\frac{0.12 - 0.06}{0.06}$
21	Find the square root of $5\frac{4}{9}$	22	James sold a cow at sh. 320,000. If he made a profit of sh. 80,000, find the price at which he bought the cow.

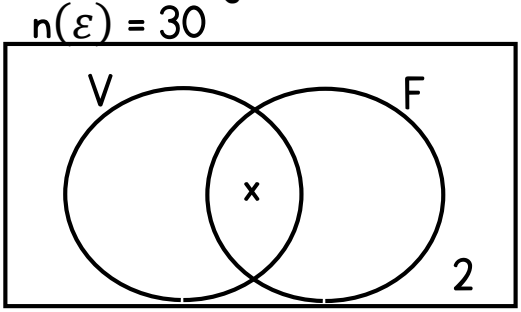
23	Find the value of x in the figure below.  	24	Workout: $1\frac{1}{12} - \frac{5}{6}$
25	The total number of black and blue pens in the bag is 12. If the probability of picking a blue pen from the bag is $\frac{2}{3}$, how many black pens are in the bag?	26	How many lines of symmetry does a rectangle given below have? 
27	Maria has a bundle of five thousand shilling notes numbered consecutively from AP534201 to AP534300. How much money does she have?	28	Use the graph below to answer the question that follows.  Write the coordinates of point P.

29	Solve the inequality: $1 + \frac{1}{2}x > 2$	30	A bank gives a simple interest rate of 12% per annum. What will be the interest on sh. 400,000 banked for 9 months?

SECTION B: 60 MARKS

31 In a class of 30 students, 20 play volleyball (V), 15 play football (F), (x) play both volleyball and football and 2 do not play any of the two games.

a. Use the information given above to complete the Venn diagram below.



b. Find the value of x.

c. Find the number of students who play only one game.

32 Kaliso's poultry produces 3,000 eggs in a day. If the eggs are packed in trays of 30 eggs each, how many trays of eggs does he produce in a week?

33 a. Using a ruler, a pencil and a pair of compasses only, construct a parallelogram KLM in which $\overline{KL}$ = 4cm, $\overline{LM}$ = 6cm and angle NKL = 60°.

b. Measure the length of diagonal KM.

34 Betty was given sh. 20,000 to buy things to take to school and she bought the following;

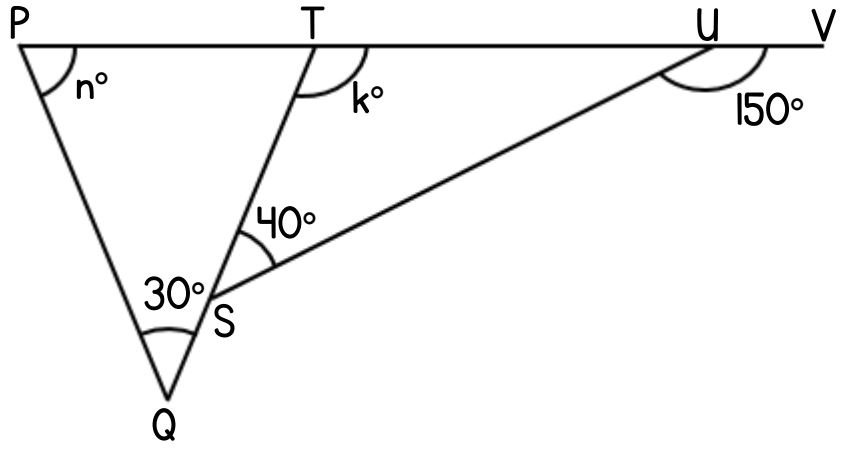
- 3 dozens of exercise books at sh. 2,800 per dozen.
- 4 bars of washing soap at sh. 900 per bar.
- 4 tablets of washing soap at sh. 1,200 per tablet.
- 2 tubes of toothpaste at sh. 800 per tube.

a. How much money did she spend altogether?

b. How much money did she remain with?

35	Kato wrote three digit numbers using the digits 1, 3 and 6. a. Write down all the possible three digit numbers greater than 300 that Kato wrote. b. What was the probability of Kato writing an even number?
36	Milk was mixed with water to make tea. If 14 litres of milk was used and this was 40% more than the amount of water in the tea, how much tea was prepared?
37	a. Given that $\frac{2}{3}$ of Peter's salary is equal to $\frac{3}{4}$ of Mary's salary, find Peter's salary if Mary's salary is sh. 120,000. b. Express Mary's salary as a fraction of Peter's salary.

38 In the diagram below, PTUV is a straight line, angle TSU = 40°, angle SUV = 150° and angle PQT = 30°. Use the given information to find the value of each of the angles marked k and n.



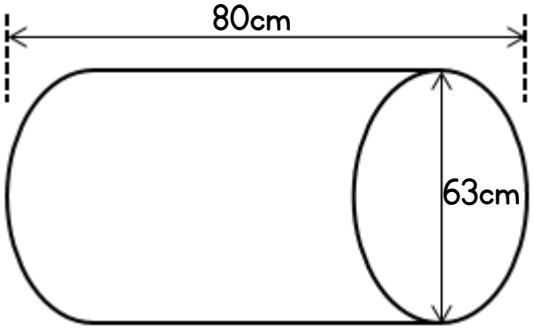
39 a. Solve: $\frac{1}{2}m + 7 = 2m - 2$

b. Solve: $\frac{10}{n} + 4 = 24$

40 a. Workout: $\frac{2.7 \times 4.8}{2.4 \times 3.6}$

b. Simplify: $1\frac{1}{6} \times 1\frac{1}{7} \div 2\frac{1}{3}$

41 The diagram below shows a metallic drum which was cut open to form a door sheet. Use it to answer the questions that follow.

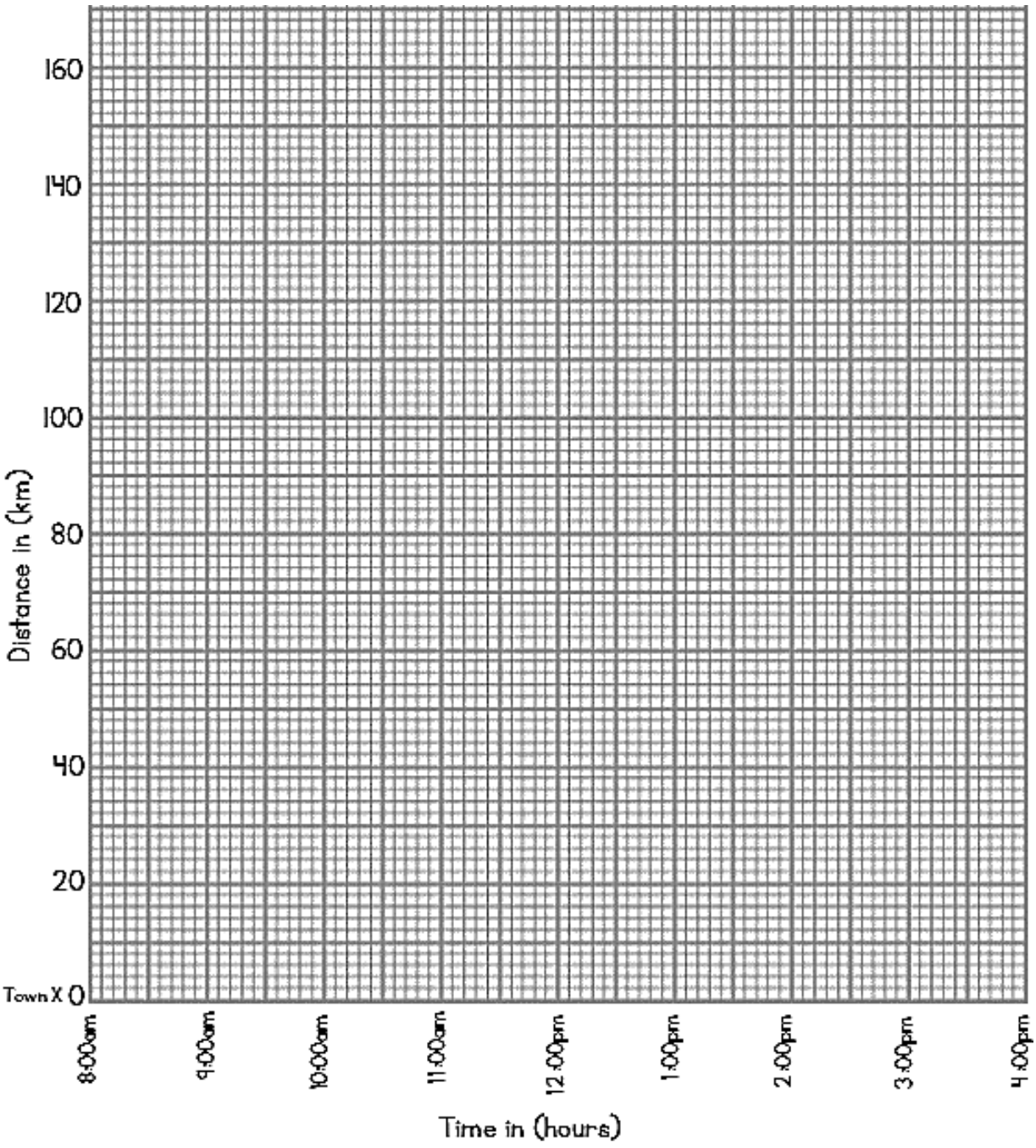


a. Find the length of the door, which was made out of the sheet. $\left(use\ \pi = \frac{22}{7}\right)$

b. Workout the area of the door in metres.

42 Mutono left town X at 8:00a.m and drove at 90km per hour for one hour to town Y. He rested for half an hour at town Y. He left town Y and drove for one hour at 70km per hour to town Z. He rested for half an hour at town Z. He then left town Z and drove back to town X at a steady speed of 40km per hour.

a. Draw Mutono's journey on the graph provided below. (see next page)



b. Workout Mutono's average speed for the whole journey.