MATHEMATICS PLE 2008

CANDIDATE'S INFORMATION

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

Name : _____

Signature : _____

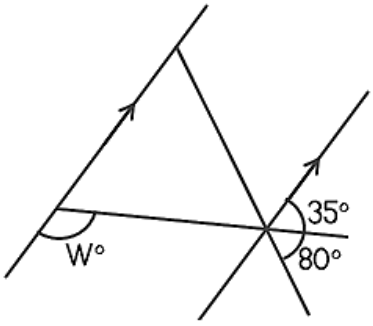
School name : _____

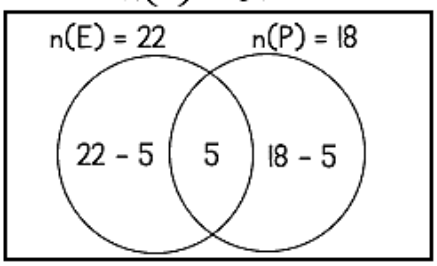
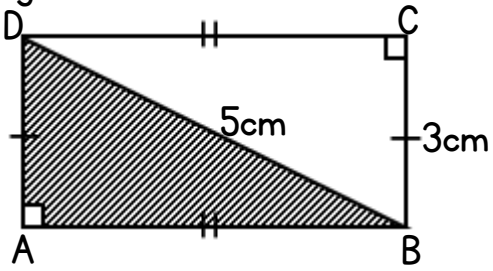
District name : _____

SECTION A: 40 MARKS

1	Workout: $60 \div 6$	2	Given that set K = {1 , 2 , 3 , 4 , 5} and set L = {0 , 5 , 7}. Find (K∩L)
3	Simplify: $4k - 3k + k$	4	A meeting started at 9:30am and lasted 50 minutes. At what time did it end?
5	Express 0.3 as a fraction.	6	Arrange the following numbers beginning with the smallest: 3 , 0 , -1 , 8 , -6

7	Using a pair of compasses, a ruler and a pencil only, construct an angle of 30°.	8	Abdul bought the following number of goats during the week as follows: <table><tr><td>Days</td><td>Mon</td><td>Tue</td><td>Wed</td><td>Thur</td><td>Fri</td></tr><tr><td>Goats</td><td>3</td><td>2</td><td>5</td><td>7</td><td>8</td></tr></table> Find the range.
9	Write CXC in Hindu-Arabic numerals.	10	If Nandi buys 4 text books for shs. 240,000, how much will 9 similar books cost?
11	Write in words: 3,602	12	The time on the 24-hour clock is 13:42hours. What will it be on the 12-hour clock?
13	Find the next number in the sequence: $\frac{1}{2}, \frac{1}{4}, \frac{1}{8}, \frac{1}{16}, \_\_\_\_\_$	14	A trader got a simple interest of shs. 18,000 after depositing shs. 90,000 in a bank at an interest rate of 10% per annum. For how long was this money in the bank?

15	A taxi carries 14 passengers while a bus carries 29 passengers. If the two vehicles make two journeys each, how many passengers will they carry altogether?	16	Solve the equation: $5t - 2(t + 1) = 1$
17	Change 9 base ten to base two.	18	The base of a cube is $25cm^2$. Calculate the volume of the cube.
19	Solve the inequality: $^-2p + 4 > 6$	20	The exterior angle of a regular polygon is 45°. Find the number of sides the polygon has.
21	The difference between $\frac{1}{5}$ and $\frac{1}{6}$ of a number is 7. Find the number.	22	Find the value of angle W in the figure below. 

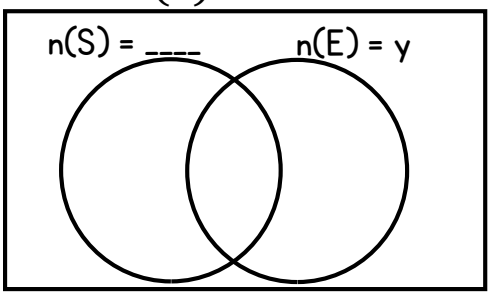
23	A motorcyclist covered a distance of 42km in $3\frac{1}{2}$ hours. Calculate the average speed of the journey.	24	Study the Venn diagram below carefully and answer the questions that follow. $n(\varepsilon) = 38$  Find n(EUP)
25	Simplify: $\frac{3}{9} - \frac{1}{18}$	26	Workout: $\frac{0.25 \times 5.4}{0.045}$
27	Find the square root of 1.96	28	Find the area of the shaded part in the figure below. 
29	Solve: $5 + n = 3$ (finite 7)	30	Peter scored the following marks in a test: 9 , 8 , 7 and 4. Find Peter's mean score in the test.

SECTION B: 60 MARKS

31 At a birthday party, 72 guests were invited. 55 were served with sodas (S), y were served with mineral water (M) while 7 did not take any of the two drinks and 17 were served with both drinks.

a. Represent the above information on the Venn diagram.

$n(\varepsilon)$ = ____



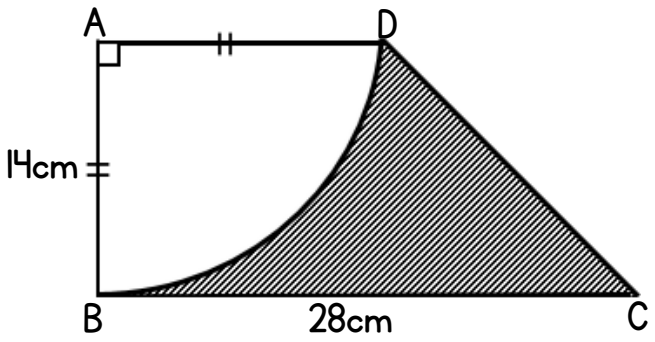
b. Find the value of y.

c. How many guests were served with one drink only?

32 a. Given that $m = 2$ and $y = \bar{3}$. Workout: $\frac{2(ym)+2}{(m-y)-6}$

b. Barbra is 4 times as old as Mukasa. In 10 years' time, Barbra will be twice as old as Mukasa will be. How old is Barbra and Mukasa now?

33 The figure below is a trapezium where AB = AD = 14cm, BC = 28cm and ABD forms a quarter of a circle. Calculate the area of the shaded part. $\left(use\ \pi = \frac{22}{7}\right)$



34 The district inspector of schools of a certain district registered 4000 candidates for PLE 2007. Out of these, 30% were girls below 15 years and 25% were boys below 15 years of age. If there were 1,000 girls who were above 15 years of age;

a. Find the number of girls who sat for PLE.

b. Find the number of boys who sat for PLE.

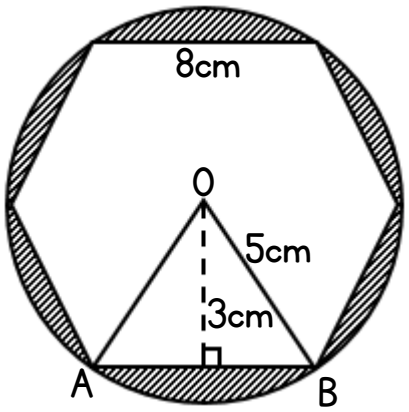
c. How many first grades did the district get if all the candidates below 15 years of age passed in division one?

35 A certain county in Uganda has a population of 300,000 people. Of these, $\frac{3}{5}$ are female and $\frac{5}{6}$ of the females are girls.

a. If $\frac{2}{3}$ of the males among the population are boys, find the ratio of boys to girls.

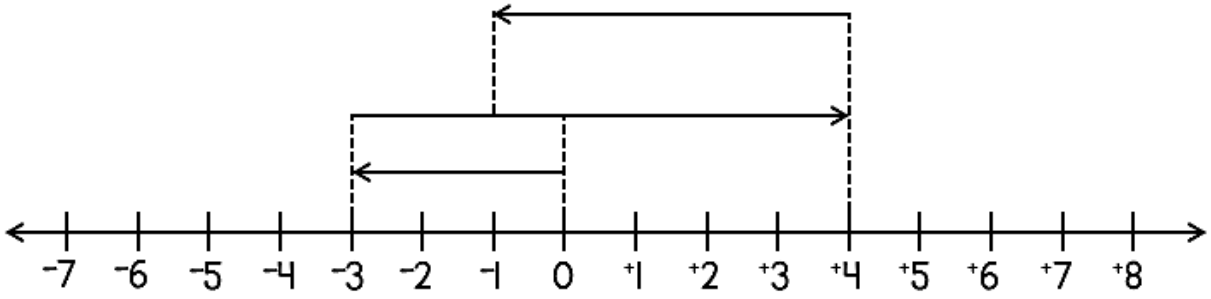
b. What is the total number of boys and girls in the county?

36 The figure below shows a regular six-sided polygon of sides 8cm long enclosed in a circle of radius 5cm. Triangle OAB of height 3cm is part of the polygon.



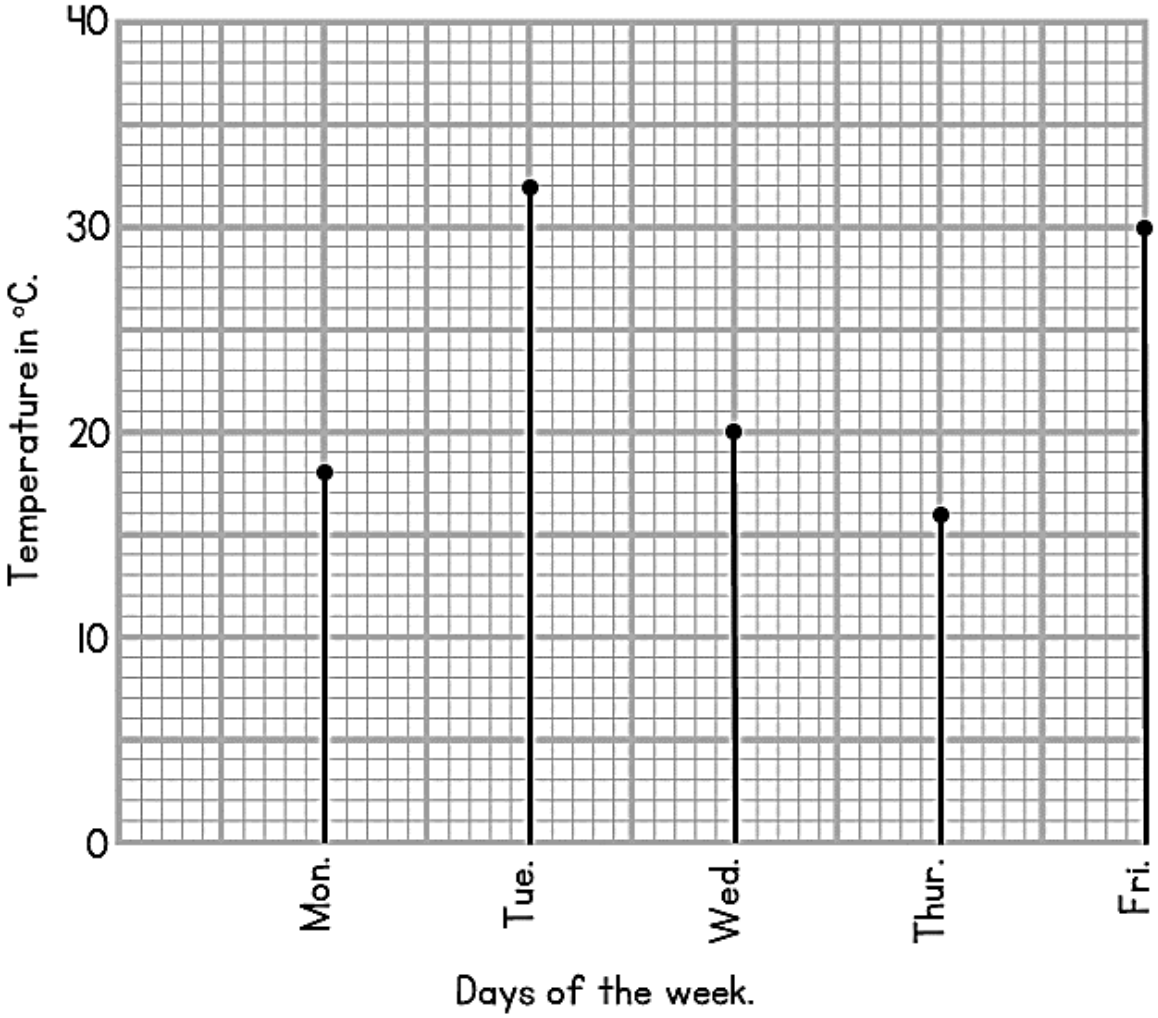
a. Find the area of the polygon.

b. Find the area of the shaded region. $(use\ \pi = 3.14)$

37	Write the mathematical statement shown on the number line below. 
38	a. Using a pair of compasses, a pencil and ruler only, construct a triangle EFG in which $\overline{EF}$ = 8cm, angle GEF = 60° and angle EFG = 45°. From G, drop a perpendicular $\overline{FG}$ to meet $\overline{EF}$ at H. Measure $\overline{GH}$ b. Using $\overline{GH}$ as the height, find the area of triangle EFG.

39 The line graph below shows the temperature of a certain place recorded over a week. Study the graph and answer the questions that follow.

TEMPERATURE GRAPH

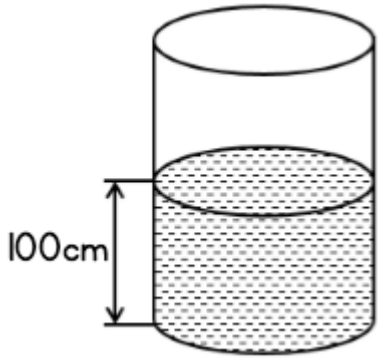


a. On which day was the highest temperature recorded?

b. What was the lowest temperature recorded?

c. Find the mean temperature of the given days.

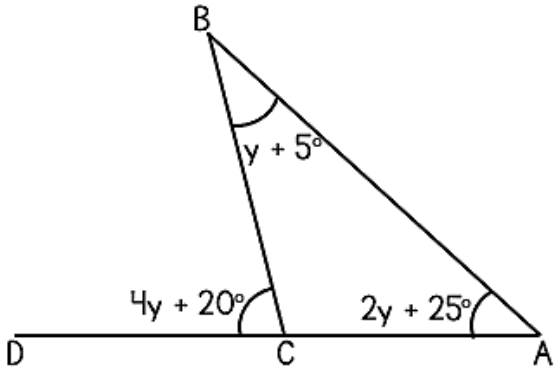
40 The figure below is a cylindrical tank containing 1,540 litres of water.



a. Find the radius of the tank. $\left(use\ \pi = \frac{22}{7}\right)$

b. If the tank is $\frac{4}{5}$ full, find its capacity.

41 In the diagram below, CAB is a triangle and DCA a straight line. Study it and answer the questions below.



a. What is the value of y?

b. What is the size of angle ACB?

42 A ship left Port Bell for Kisumu on a bearing of 090°. It sailed for 120km then changed its course and sailed on a bearing 130° for 90km before reaching Kisumu.

a. Draw a sketch diagram of the journey.

b. Using a scale 1cm=20km, draw an accurate diagram of the whole journey.

c. What is the bearing of Kisumu from Port Bell?