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மாகாணக் கல்வித் திணைக்களம் - வட மாகாணம்

Provincial Department of Education - Northern Province

Provincial Level Year End General Exam - 2013

Grade - 11 | **Mathematics - I** | **2 hours**

Index Number :- .....

.....

Supervisor Signature

Note :-

- This question paper has 8 pages.
- Write the index number in this page and the 3rd page also.
- Answer all questions in this paper
- Use the spaces given under each question and state clearly the needed steps
- One mark for the questions no 1 to 10 and two marks for the questions no 11 to 30 in part A
- 10 marks for the correct answers of every questions in part B.

FOR USE OF MARKER		
	Question No	Marks
A	1 - 10	
	11 - 30	
B	1	
	2	
	3	
	4	
	5	
Total		

.....
Marker

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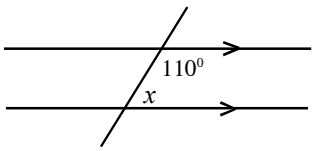
Checker

Part A

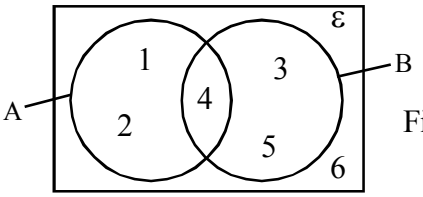
♦ **Answer all question on this paper.**

01) Cost of one litre milk is Rs 40. Find the cost of 250ml milk

02) Solve $x - 2 = 5$

03) 

Find the value of x.

04) 

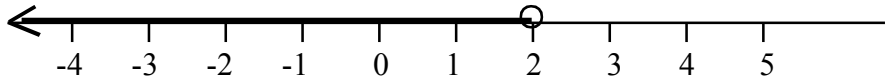
Find n (A) using Venn diagram.

05) 1, 2, 2, 3, x, 3, 4, 5 Mode of the above distribution is 3. Find x

06) $\begin{pmatrix} 2 & 3 \\ 3 & 5 \\ -1 & 4 \end{pmatrix}$ Find the order of matrix.

07) Factorize $x^2 - x$

08) If the probability of a match stick gets fire is $\frac{3}{4}$ Find the probability of a match stick not gets fire.

09) 

write the inequality represented by number line.

10) $x : 3 = 24 : 18$ Find x.

11) Simplify $\frac{3}{x-3} - \frac{2}{3-x}$

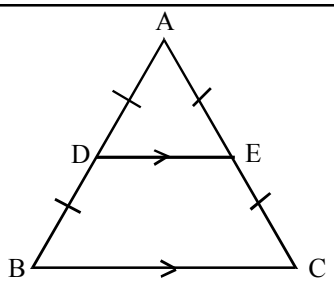
12) Rs 1600 is the tax for quater year of the shop. Which pays. 8% tax to the Urban council.

a) Find the tax for a year.

b) Find the annul value of the shop.

13) Solve $2 \lg x + \lg 8 = 5 \lg 2$ without using log table.

14)



D and E are the midpoints of AB and AC of an equi-lateral triangle ABC with length 6cm.
Find the perimeter of trapezium DECB.

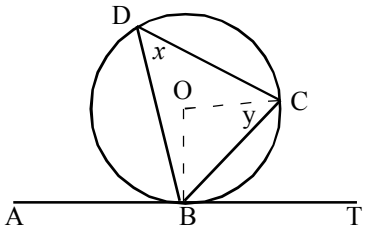
15) 4 men can finish a certain work in 3 days. How many days are needed for 9 men to finish the three time the work.

16) From the function $y = (x - 2)^2 - 3$

a) Find the equation of axis of symmetry

b) Find the minimum value.

17) ABT is tangent of a circle with centre O. $C\hat{B}T = 40^0$ Find the value of x and y.



18) Make r as the subject in $E = \frac{r}{r-1}$

19) An interior angle of a regular polygon is 150^0. Find the number of sides of the polygon.

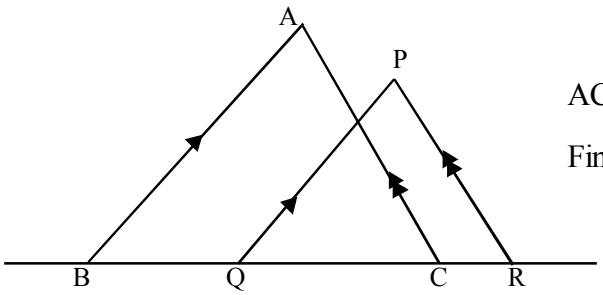
20) A person invested Rs 6000 to buy Rs 10 shares at Rs 15.

a) Find the number of shares he bought.

b) Find the nominal value of shares.

21) Which term is zero in the number pattern 60, 57, 54, 51.....

22)

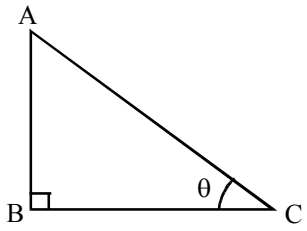


AC = 10cm, BC = 6cm and PR = 8cm in the diagram.

Find QR.

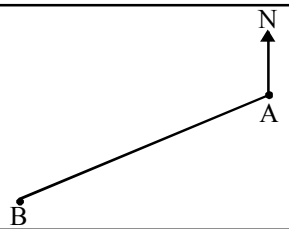
23) $x^2 + \frac{1}{x^2} = 23$ Find $x + \frac{1}{x}$

24)



If $\tan\theta = \frac{1}{2}$ Find $\sin\theta$

25)



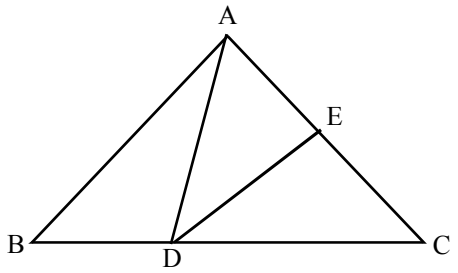
If the bearing of B from A is 187^0

Find the bearing of A from B.

26) Simplify.

$$4\frac{1}{3} \div \left(3\frac{1}{3} - 2\frac{1}{4}\right)$$

27)



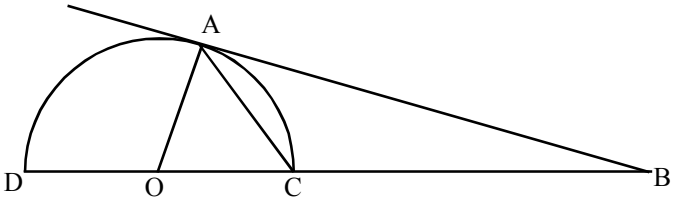
In the diagram CD = 3BD

AE : EC = 2 : 3

If the area of Δ ABC is 60cm^2

Find the area of Δ AED

28)

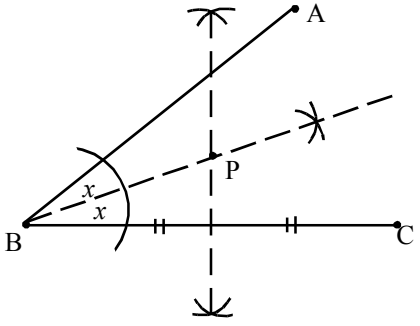


O is the mid point DC in the given half circle.

AB is the tangent AB = 8cm, radius of the circle is 6cm.

Find the length of BC.

29)



Fill in the blanks according to diagram.

The point P is located, equidistant from the lines ..... and ....., equidistant from the points ..... and .....

30) (If lg 2 = 0.3010)

Find the value of lg 0.02.

Part B

01) A fruit seller reserved $\frac{3}{8}$ part of fruits for his own needs. $\frac{1}{10}$ of the remainder was spoiled. $\frac{2}{3}$ part of the remaing fruits are small size. remaing fruits are large size. If he sells the large sizes fruits at Rs 40 each and grained Rs 1200.

a) Find the fraction of fruits after reserving for his own needs?

b) What is the fraction of spoiled fruits in whole fruits?

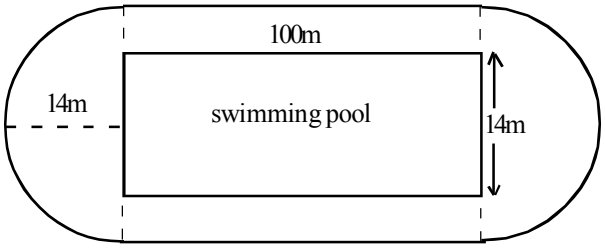
c) Write the fraction of small fruits in whole fruits?

d) How many fruits are there in large size?

e) What is the fraction of large size fruits in whole part.

f) Find the total number of fruits he bought.

02)



A swimming pool with length 100m and breadth 14m is in the playground. grass was laid in the remaing area of the ground.

a) Find the area of the swimming pool.

b) What is the area of a semicircular part.

c) Find the area of the ground.

d) Find the area of the part where the grass was laid

e) Depth of the swimming pool is 2.5m. Find the volume of the water .

03) Ravi, Raja and kamal decided to start a bussiness. Ravi and Rajah invested Rs 40,000 and Rs 60,000 respectively at the start of the year. after 4 months Kamal invested Rs 75,000 and joined the bussiness. Rs 84,000 gained as the profit end of the year.

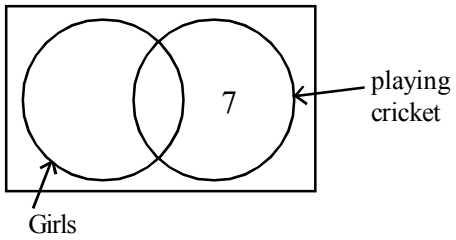
a) Find the ratio of investments.

b) Find the ratio of period of time.

c) Find the ratio the profit should be divided.

d) Rs 24,000 was paid as the rent from the profit. Find the profit gained by Ravi.

04)



In a mixed school, there are 25 students. 13of them girls 16 students can play cricket.

a) Draw the Venn diagram in your answer sheet, shade the region represent the boys who play cricket.

b) How many girls didn't play cricket.

c) How many boys are there in the school.

d) Find the probability of a student who can't play cricket.

e) find the percentage of girls who play cricket of the students who play cricket.

05) The following charts represent the marks of 35 students.

Class Interval (Marks)	0 - 10	10 - 20	20 - 40	40 - 50	50 - 80
Number of students (frequency)	4	6	.....	5	12

a) Find the frequency of students who got the marks in the class interval 20 -40.

b) Express the fraction of student who got marks below 20.

c) Draw the histogram for the above data.

d) Draw the frequency polygon

e) What is the relation between the area of histogram formed with x axis and area of the frequency polygon formed with x axis.