யா/ஹாட்லிக் கல்லூரி,பருத்தித்துறை.
J/ Hartley College, Point Pedro.

Part - A

Answer for all questions

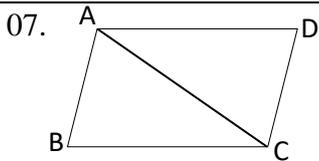| |
|---|
| 01. Find the value of 13.4 – 1.34 |
| 02. Simplify $\dfrac{\sqrt{18}\times\sqrt{12}}{\sqrt{6}}$ |
| 03. 20% of the value of a product is given as a discount, What is the value of the product if the discount is Rs 200? |
| 04. Find the volume of the cone of 3r radius and 2r Perpendicular height ? |
| 05. Solve 2x - 1 > x + 1 and find the least whole value for x? |
| 06. Without solving 2x + 7y = 10, 3x – 2y = 5 and find the value of x + y ? |
| 07. In the given figure, If $A\hat{B}C = B\hat{A}C$, $A\hat{C}D = A\hat{D}C$, Name two sides equal to BC |
| 08. Solve $\dfrac{a}{2} - \dfrac{a}{3} = 1$ |

09. Express the 18th term in th geometric progression 8,16, 32……. as a power of 2?
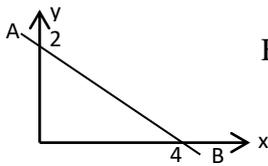
10. If A= {x, $x^2 + 1 = 10$, x∈z $^+$}, find n(A)?

11.
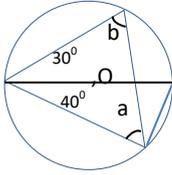
In the given figure, the Centre of the circle is O. Find the value of a and b?

12. There was 7/12 water in a tank. After using 50 litres of water ¼ was left . Find the volume of the tank?

13. If $2\log_3 9 + x = \log_2 32$ Find the value of x?
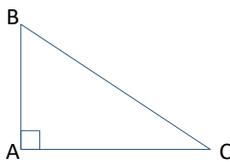
14.

Find the gradient of line AB?

15. If x : y = 2 : 3 , find the value of $\frac{3x+4y}{y}$?

16.

In the given figure; $B\hat{A}C = 90^0$, AB : AC = 1 : 3 and BC = 10cm. Find the Area of ΔABC?
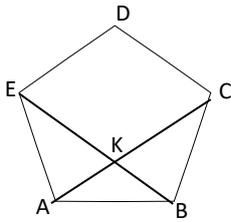
17. Find the
 i. minimum value?

 ii. Equation of axes of symmetry of the graph y = $2x^2 - 3$?
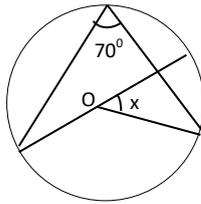
18. If lg 3 = 0.4771, Find the value of lg $3\frac{1}{3}$?

19	In the given regular pentagon ABCDE, ACA and BE are intersect at K. Find the value of $A\widehat{K}B$?

20. Find the value of $\sqrt{107 \times 93 + 49}$ by use the factor knowledge?

21. The Centre of the circle is O. Find the value of x according to the information indicated in it?

22. Make 'a' as the subject of $A = \frac{3a}{b} + \frac{ac}{d}$

23. Three men can finish a certain work in 4 days. If 2 days later one could not come to work due to illness, How many days will work late?

24. Find the common ratio of the geometric progression $(p + q)^{-4}$, $(p + q)^{-5}$, $(p + q)^{-6}$ ……………..

25. A, B are two fixed points. X is a moving points on the perpendicular bisector of AB Such that AX = XY, and AX is produced to Y. Draw the rough sketch to show the Locus of Y?

Part – B

Answer all questions On this question paper it self.

01. a. In Kumaran's Salary, the ratio between expenditure and saved is 5 : 3

      1. What percentage of the money did kumaran spend on his salary?

      2. If his saved amount is Rs6000, Find the total salary amount of Kumaran?

  b. A few months later, as his expenditure increased, the ratio between expenditure and residual cash was 7 : 3. Show his increased expense as a percentage of the previous expense?

  C. The next month he received a 10% salary increase and expense was the same as in (b). Sow the ratio between his expense and saving at present is 7 : 4?

02.
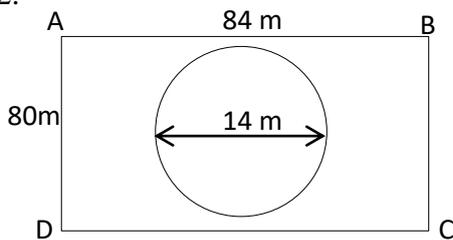
A rectangular land is shown in the figure. Pineapple is cultivated in a circle of 7m radius in its center.

i. Find the perimeter of the rectangular land?

ii. Give it in very simple form of the ratio between the perimeter of rectangular land and circumference of circle land?

iii. Find the area of pineapple uncultivated land?

iv. For banana cultivation, a triangular area of 120m^2 should be assigned to AD as a boundary in uncultivated land of pineapple. Draw this with appropriate measurements?

03. The probability of a randomly selected students who has sat the G.C.E (A/L) examination during a particular year, passing the examination is 3/5. The Probability of randomly selected student who has passed the examination gaining admission to a university is 1/5.

i. What is the probability of randomly selected student from those who sat the examination during a particular year **failing** A/L examination?

ii. Draw a tree diagram to represent the events of passing and failing the A/L examination?

iii. Extend the previous tree diagram to indicate the probabilities of a student who has passed gaining university admission or not?

iv. Find the probability of a student selected at random of those who sat in particular year passing the advanced Level Examination and gaining admission to the university.

v. In 150 students appeared for the A/L examination from a particular school, find the number of students who can be expected to gain admission to a university

04. Kamalan spend 1/3 of the money to buy vegetable and spent ¼ of the reaming amount to buy fruits.
1. After buy the vegetable, What is the fraction of the money is left?

2. What is the fraction the money spent to buy fruits?

3. After buying the vegetables and fruits if kamalan hold Rs600 as remainder. Find the money he brought to the market?

4. If only he had spent half of what he originally spend on fruits, what is the fraction of total money is expected to be left over to him?

05. a.
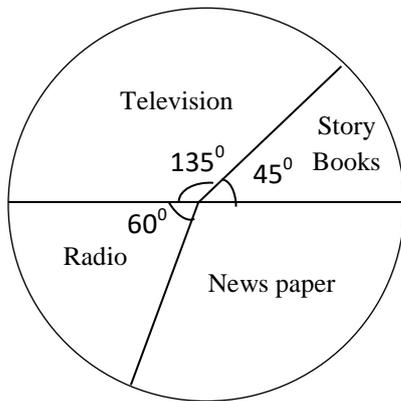
a. The information of grade 11 student's entertainment are shown in the pie chart
   1. Find the angle of the sector which represented by newspaper?
   2. Which entertainment is preferd by most students?
   3. If the number of story books readers is 18, find the total number of the students in grade 11?

b. Following table shown marks that students in a class have earned in English examination

Marks	0-10	10-20	20-30	30-40	50-80
Number of Students	5	7	10	16	12

1. Draw a histogram to represent the above information.
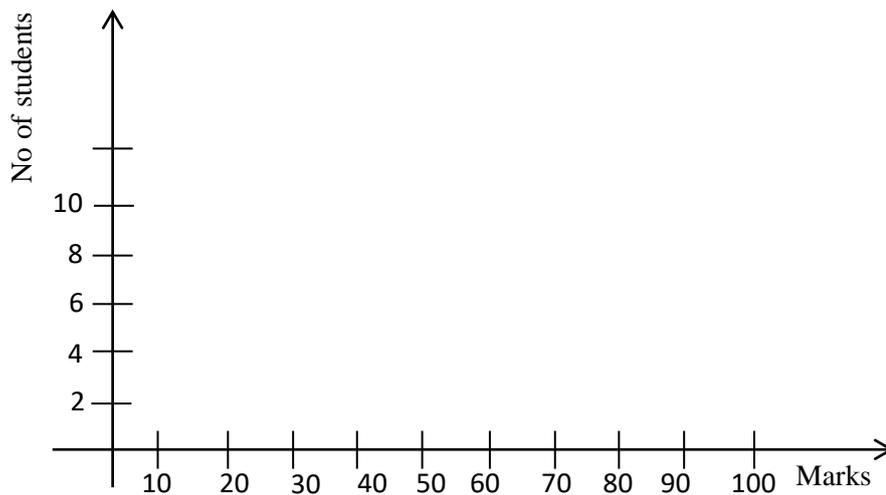
2. Draw the frequency polygon.

விடுமுறைகால செயலட்டை – தரம் 11
Holiday Worksheet – 2020 – Grade 11

| Mathematics | 32 | T | II | 2.30 மணித்தியாலம்
2.30 Hours |

சுட்டெண்
Index No

Mathematics - II

Part – A
Answer 5 question only

01. Chithra, who produces cloth as a small business, makes a profit of 30% of the money her produces.
     if the production cost of a bag is Rs 140.
    i. Find the selling price of a bag by Chithra?
    ii. If 200 bags are sold per month, what is her monthly income?
    iii. A retailer sells a bag at a marked price of Rs250 for Rs 225. Give his discount as a percentage of marked price?
    iv. Chithra receives a loan of Rs 40000 from a company offering a simple interest rate of 3% per month. after few months she was released from the loan by paying a sum of Rs52000. Find the period of the loan?

02. i. Given blow is an incomplete table with values of **y** relevant to a few given values of **x** of function
     $y = (x-2)^2 - 3$

x	-1	0	1	2	3	4	5
y	6	1	-2		-2	1	6

a.   i. Find the value of y, When x = 2?
     ii. using the scale of ten small division as one until along x axis and along y axis draw the graph of above function?

b.   From your graph
     i. Write the interval values of x, when $y \leq -2$?
     ii. Find the solution for x, when $x^2 - 4x + 1 = 0$
     iii. Find the value of $\sqrt{3}$ from the above solution?

03.

x cm

(x+1) cm

$(\frac{1}{2}x - 1)$ cm
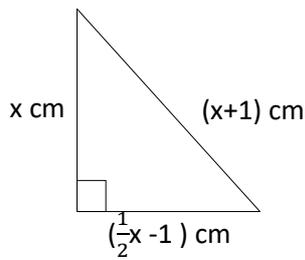
a. i. According to information given on diagram, construct an equation by use pythagarous relation?

ii. By solve that equation, find the value of x and find the perimeter of triangle?

b. i. assume that the roots of equation $ax^2 + bx + c = 0$ are $\frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$

solve the equation $x^2 - 7x - 5 = 0$, and write the answer nearest to second decimal.

04. An almyra which is solved for a cash payment of Rs200000 can also we bought by making a down payment 10% of above cash payment, and paying the rest in 18 equal monthly installment. in this case, the interest calculated on the reducing balance at an annual interest rate 12% Calculate the value of a monthly installment?

05. a. Find the volume of a cylindrical shaped vessel of 14 cm in height and 12cm diameter.

b. The vessel was completely fill with water and when open this vessel if 3 cubic centimeter of water is discharge per second, Find the time in minutes to take the vessel empty?

c. Find the value of $\frac{\sqrt{0.05672}}{(2.352)^2} \times 72.56$

by using logarithm table.

06. a.Solve

$$\frac{2}{x} - \frac{1}{y} = \frac{7}{15}$$

$$\frac{1}{x} + \frac{2}{y} = \frac{11}{15}$$

b. The price of a pen is Rs 2. more than of triple the price of a pencil. The cost of three pencils and 4 pens is Rs98 take the price of one pencil is Rs x

i. Find the price of a pen in terms of x?

ii. Construct a pair of simultaneous equation and solve them?

iii. Find the price of a pen?

Part – B
Answer Five question only.

07. The first term and eighth term of an arithmetic progression are 3 and 31 respectively.
    1. Show that 4 is the common different of above progression?
    2. Which term is 47?
    3. Find the sum of first12 terms?
    4. Find the number of terms of above progression when the sum of first n terms is 465?
       (Hint 465 = 31 x 15)

08.   i. Construct the triangle ABC such that AB = 8cm, BC = 6cm and $A\hat{B}C = 90^0$
       ii. Construct the perpendicular bisector of AB.
       iii. Mark the point as O where the above (ii) construction meets AC?
       iv. Construct the circle that has its Centre O and radius OB.
       v. measure and find the radius of the circle.

09. Out of 73 people in a group, 40 like cricket,45 not like football. Double number of people who like both games are not like two games. The number of people who like both games is x.
       i. Draw a suitable Venn diagram and indicate this information in it.
       ii. Construct and equation in term of x and solve it.
       iii. How many of who like football do not like cricket.
       iv. What is the probability that a person selected from this group will only like one game ?

10. Weight of the parcels and number of parcels shipped on a given day it shown below

Weight (Kg)	2-4	4-6	6-8	8-10	10-12	12-14	14-16
No. of. Parcels	2	5	7	11	9	4	2

i.

       i. What is the model class?
       ii. Find the mean weight?
       iii. If the fee for sending 1Kg parcels is Rs 90, Find the income of the company that day?

11.
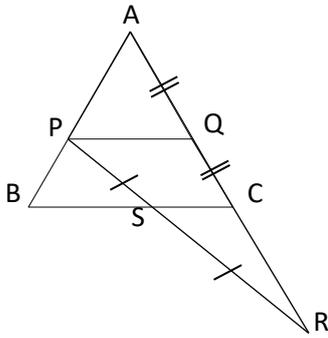
In triangle ABC, Q is the mid point of side AC · PQ // DC, AC is produced to R such that PS = SR,
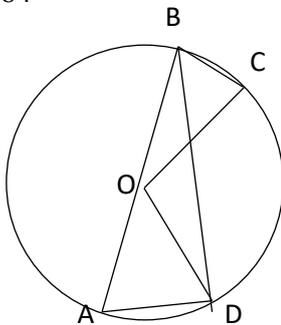(here S is the mid point of PR)
show that
i. PQ = ½BC
ii. 3AQ = AR
iii. 2BS = 3PQ

12. In the figure Centre of the circle is O and AB is the diameter. Angel bisector of $A\hat{B}C$ is AD.
$C\hat{O}D = 64^0$

i. What is the magnitude of $C\hat{B}D$?
ii. What is the magnitude of $A\hat{O}D$?
iii. What is the magnitude of $O\hat{A}D$?
iv. Show that $O\hat{D}B = 32^0$?
v. prove that OD // BC, write the reason?