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மேல் மாகாணக் கல்வித் திணைக்களம்
Department of Education - Western Province

වර්ෂ අවසාන ඇගයීම

ஆண்டு இறுதி மதிப்பீடு - 2021

Year End Evaluation

ශ්‍රේණිය தரம் Grade	9	විෂයය பாடம் Subject	Mathematics	පත්‍රය வினாத்தாள் Paper	I, II	පැය மணித்தியாலம் Hours	2

PART I

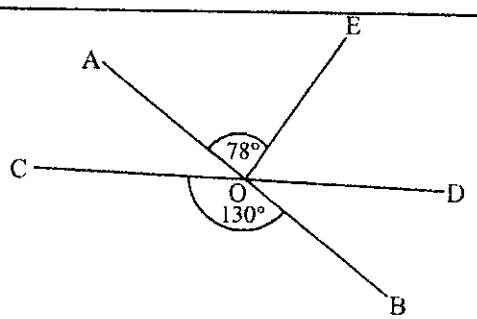
- **Write answers for the questions 1 – 25 on this paper itself.**
- **Each question carries 2 marks only.**

01. Write in scientific notation. 43 000

02. Find factors

$3x - 3 + ax - a$

03. AB and CD lines are intersected at O. If $\hat{COB} = 130°$, $\hat{AOE} = 78°$ Find the magnitude of DOE.

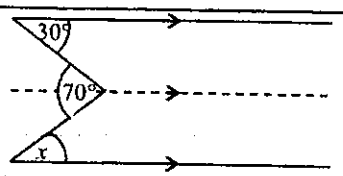


04. In the number pattern 0.1 , 0.4 , 0.7 , 1 ...

(i) Write the first term.

(ii) Find the common difference.

05. According to the given information in the figure find the value of x

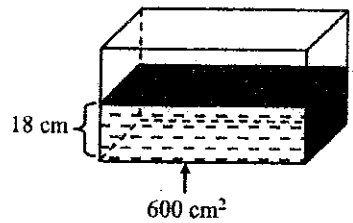


06. Find the value of this. $10001_{two} - 111_{two}$

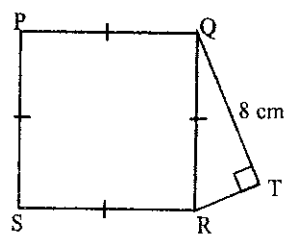
07. This figure shows a fish tank with the shape of a cuboid. Area of the bottom of it is 600 cm^2 .It is filled with water up to18 cm .

(i) Find the volume of the water in the tank in cubic centimeters.

(ii) Write it in litres.



08. The length of the side of PQRS square is 10 cm. If QT = 8cm find the length of RT.



09. Make the subject as "b" in the formula $a = 2b - c$

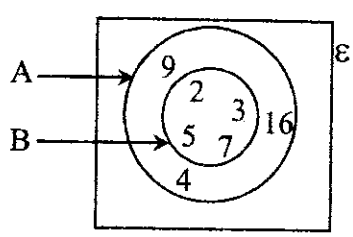
10. Find the circumference 0f a circular shaped floer bed with the radius 7 m.

11. Simplify. $\frac{4}{2x+1} + \frac{1}{2x+1}$

12. Fill in the blanks using the suitable symbols.

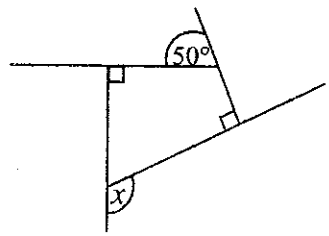
(i) 4 ..... A

(ii) B ..... A



13. In a certain soft drink manufacturing factory, a machine can make 3 600 bottles in 3 hours. Find the number of bottles that can be made in 8 hours.

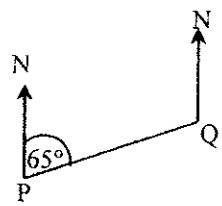
14. Find the value of x according tp the given values in the diagram.



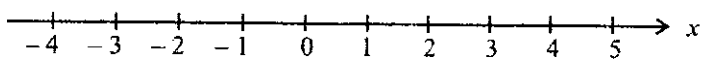
15. Using the given diagram find the

(i) bearing of Q from P

(ii) bearing of P from Q



16. Represent the solution set of the inequality $x \leq 3$ on the given number line.



17. Find the value of this.

$(x^4)^0 + 1$

18. Find the probability of getting a white bead from a bag which contain 2 black beads and 3 white beads in same size.

19. It is given that $x = p - q$ and $y = r + q$ If $x = y$ show that $p = 2q + r$

20. The marks obtained by students out of 20 for a maths test is given below.

12 , 14 , 15 , 15 , 16 , 16 , 16 , 17 , 17 , 18 , 19

Find the

(i) Range

(ii) Meadian

PART II

- **Answer the first question and any other four questions only.**
- **First question carries 16 marks and each other question carries 11 marks.**

01. An incomplete table drawn to draw the graph of $2y = 2x - 1$ is given below.

(i) Copy the table in your answer script and fill in the blanks.

x	$2x-1$	y	(x, y)
-2	$2\times(-2)-1$	-5	$(-2, -5)$
-1	$2\times(-1)-1$	-3	$(-1, -3)$
0	$2\times(0)-1$	-1	.....
1	$2\times(1)-1$	1	(1 , 1)
2	.....	.....	.....

(ii) Draw the above graph in a suitable coordinate plane.

(iii) Write the gradient and the y intercept of the graph.

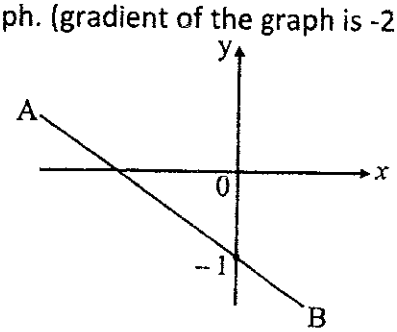
(iv) Using the graph

(a) Find the value of y when $x = 1.5$

(b) Find the value of x when $y = 2.5$

(v) Write the equation of the graph which is parallel to the graph $y = 2x - 1$ and passes through the origin.

(vi) Using the given rough sketch write the equation of the graph. (gradient of the graph is -2)



02. (a) Simplify.

(i) $\frac{3}{7} + \frac{2}{7}$ **(ii)** $\frac{2}{3} \times \frac{3}{8} \div \frac{1}{5}$

(b) Find the $\frac{3}{5}$ **of** Rs.1800

(c) During the first day $\frac{1}{4}$ of the 800kg of rice stock was sold. During the second day $\frac{2}{5}$ of it was sold.

(i) What is the fraction of remaining amount of the rice after 2 days ?

(ii) What is the mass of the remaining amount of rice ?

03. Using only the compass, straight edge and pencil construct these.

(i) Construct a line segment with 7.5 cm and name it as PQ .

(ii) Construct the $\hat{PQR}$ triangle with $\hat{RPQ} = 30°$ and $\hat{PQR} = 45°$

(iii) Consrtuct the perpendicular bisector of the line RQ and name the intersecting point of the line RQ and the perpendicular line as O.

(iv) Construct the circle with the centre as O and passes through the points R and Q.

(v) Construct the line which is parallel to PR and passes through Q.

04. (a) (i) Find the mark price of an item which bought for Rs. 7500 and to get a profit of 12%.

(ii) If it is sold for Rs. 6900 because of a damage. Find the loss percentage.

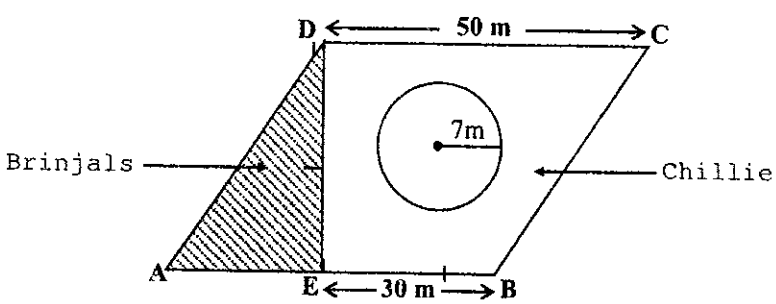
(b) A person got a loan with the simple interest rate of 3% per annum and he paid Rs.1800 as the interest for 2 years.

(i) Find the interest per year.

(ii) What is the loan amount he got?

(iii) What is the total amount he should pay after 2 years ?

05. A farmer owns a land with the shape of a parallelogram is given below.



(i) What is the area of the above land ?

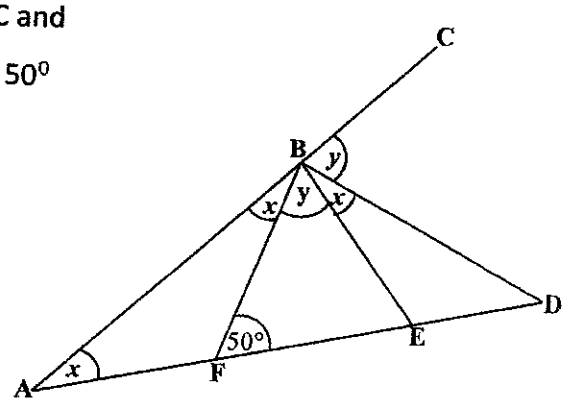
(ii) If he decided to grow brinjals in the shaded area find the area of the land which grows brinjal.

(iii) If he decided to grow green leaves in the circular shaped area find the area of it.

(iv) If he decided to grow chillie in the rest of the area find the area of the land which grows chillie.

(v) If it is costs Rs.300 to grow chillie in 1 m^2 find the cost for growing chillie.

06. In the given diagram point B is on the straight line AC and the point F and E are on the straight line AD. If $\hat{BFE} = 50^0$



(i) Find the value of x

(ii) Find the value of $x + y$

(iii) What is the magnitude of BDE ?

(iv) Find all remain angles in the triangle FBE and give a special name for the triangle FBE.

07. These are information about number of household electricity units used during 30 days in a house.

No: of units. (x)	No: of daysk (f)	fx
2	3	6
3	5	☐
4	☐	32
5	6	30
6	4	☐
7	3	21
8	1	8
	Σf = 30	Σfx = ☐

(i) Copy the above table in your answer script and fill in the blanks.

(ii) What is the mode ?

(iii) If the cost of a unit is Rs. 20 find the total bill for 30 days.

(iv) What is the mean number of electricity unit used for a day by house owner?