VNR8M

Virudhunagar District

Common Annual Examination - 2025

Standard 8

MATHS

Time: 2.30 Hours Marks: 100

I. Choose the correct answer: **10x1=10**

1) $\frac{3}{4}\times\left(\frac{5}{8}+\frac{1}{2}\right)=$ .....

a) $\frac{5}{8}$ b) $\frac{2}{3}$ c) $\frac{15}{32}$ d) $\frac{15}{16}$

2) $\sqrt{48}$ is approximately equal to .....

a) 5 b) 6 c) 7 d) 8

3) The longest chord of a circle is .....

a) Radius b) Center c) Diameter d) tangent

4) The product of $7p^3$ and $\left(2P^2\right)^2$ is .....

a) $14P^{12}$ b) $28P^7$ c) $9P^7$ d) $11P^{12}$

5) The product of LCM and HCF of two numbers is 24. If one number is 6, then the other numberis .....

a) 6 b) 2 c) 4 d) 8

6) 15% of 25% of 10000 = ...

a) 375 b) 400 c) 425 d) 475

7) The hypotenuse of a right angled triangle of sides 12cm and 16cm is .....

a) 28cm b) 20cm c) 24cm d) 21cm

8) The graphical representation of grouped data is .....

a) bargraph b) pictograph c) pie chart d) histogram

9) Two numbers are said to be co-prime numbers if their HCF is .....

a) 2 b) 3 c) 0 d) 1

10) Online or television advertisements influence people on spending decisions by .....

a) using special music b) making them think that they need the item

c) Using attractive pictures d) all the above

II. Fill in the blanks: **5x1=5**

11) The next rational number in the sequence $\frac{-15}{24}, \frac{20}{-32}, \frac{-25}{40}$ is .....

12) The ratio between the circumference and diameter of any circle is .....

13) $(p + q)(p^2-pq+q^2)$ is equal to .....

14) The intersecting point of the line $x = 4$ and $y = -4$ is .....

15) The medians of a triangle cross each other at .....

III. Say True or False: **4x1=4**

16) In a right angled triangle, the hypotenuse is the greatest side .....

17) The standard form of 2×10^{-4} is 0.0002 .....

18) Inclusive series is a continuous series .....

19) Linear equation in one variable has only one variable with power 2 .....

IV. Match the following: **5x1=5**

20) Area of a quadrant of a circle - $4x^2 - 9$
21) (2x+3)(2x−3) - x=4
22) Area of trapezium - 1
23) 20 = 6x − 4 - $\frac{1}{2} \times h \times (a+b)$ sq.unit
24) $\frac{5}{8} \div \frac{5}{8}$ - $\frac{1}{4}\pi r^2$ sq.units

V. Answer the following : (any 10) **10x2=20**

25) List any 5 rational numbers between $\frac{1}{4}$ and $\frac{7}{20}$
26) Find the cube root of 24 × 36 × 80 × 25
27) Simplify (3x + 5y) (3x − 5y) by using (a + b) (a − b) identity
28) Find the values

y = x + 3				
x	0		−2	
y		0		−3

29) Akila scored 80% of marks in an examination. If her score was 576 marks, then find the maximum marks of the examination
30) An isosceles triangle has equal sides each 13cm and a base 24cm in length. Find its height?
31) Using repeated subtraction method, find the H.C.F of the following: 42 and 70
32) Find the best buy of the following purchases (i) A pack of 5 chocolate bars for ₹175 or 3 chocolate bars for ₹114?
33) Convert the given discontinuous series into a continuous series

Class	0–5	6–11	12–17	18–23	24–29
frequency (f)	7	10	9	5	12

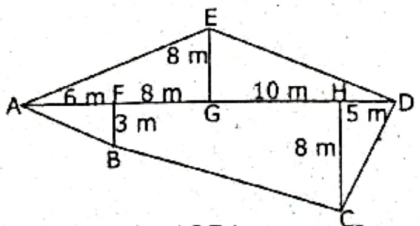
34) Find the length of arc of the sectors whose measures, central angle 45°, r = 16cm
35) Verify Euler's formula for the values, Faces = 20, vertices = 13, Edges = 30
36) Factorise : $x^2 + 14x + 49$
37) A and B together can do a piece of work in 16 days and A alone can do it in 48 days. How long will B take to complete the work?

VI. Answer the following : (any 8) **8x5=40**

38) Write the following: rational numbers in ascending and descending order

$$\frac{-3}{5}, \frac{7}{-10}, \frac{-15}{20}, \frac{14}{-30}, \frac{-8}{15}$$

39) Find square root by long division method. 17956
40) Find the area of irregular polygon shaped field given below



41) If 6 container lorries can transport 135 tonnes of goods in 5 days, how many

more lorries are required to transport 180 tonnes of goods in 4 days?

42) Monthly expenditure of Kumaran's family is given below. Draw a suitable Pie chart

Particulars	Food	Education	Rent	Transport	Miscellaneous
Expenses (in %)	50%	20%	15%	5%	10%

If Kumaran spends ₹6000 for rent, What is the total salary of Kumaran?

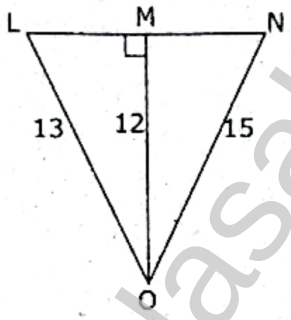
43) The following is the distribution of time spend in the library by students in a school

Time spent (in min)	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90
Number of students	25	40	33	28	30	20	16	8

Draw a frequency polygon using histogram

44) Using repeated division method, find the H.C.F of the following 184, 230, 276

45) Find LM, MN, LN and also the area of ΔLON.



46) A water heater is sold by a trader for ₹10,502 including G.S.T at 18%, Find the marked price of the water heater and GST

47) Verify the distributive property $a \times (b+c) = (a \times b) + (a \times c)$ for the rational numbers $\frac{-7}{9}, \frac{5}{6}$ and $\frac{-4}{3}$

48) Expand

i) $-2p\,(5p^2-3p+7)$

ii) $x^2(x+y+z) + y^2(x+y+z)+z^2\,(x-y-z)$

VII. Answer the following : **2x8=16**

49) a) Plot the following points in a graph sheet (4, 3), (−4, 5), (−3, −6), (5, −2), (6, 0), (0, −5)

(OR)

b) Draw the graph : $y = -3x$

50) a) Construct a quadrilateral DEAR with DE = 6cm, EA = 5cm, AR = 5.5 cm, RD = 5. 2 cm and DA = 10 cm. Also find its area

(OR)

b) Construct a rectangle with given measurements and also find its area HAND, HA = 7cm and AN = 4cm.

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