

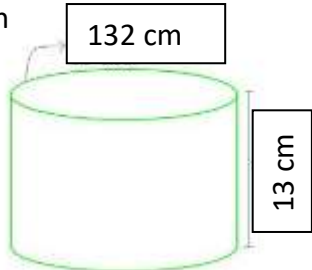


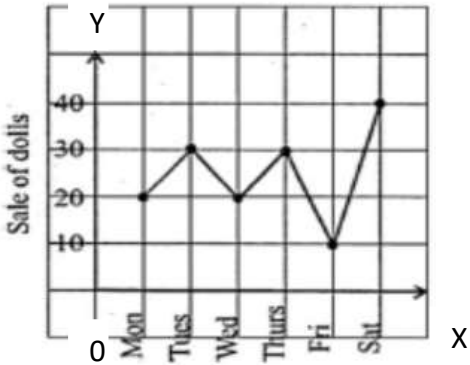
CLASS: VIII
DATE: 10/03/2024

MAX. MARKS: 80
TIME: 3 HOURS


General Instructions:

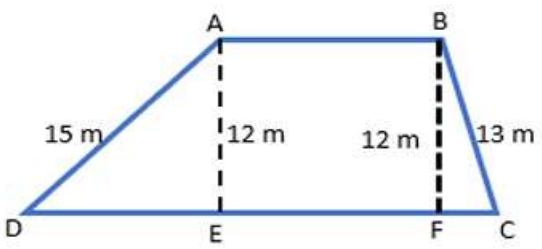
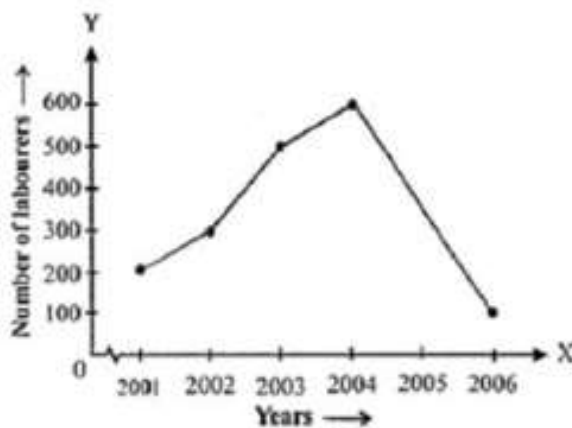
1. This question paper has five sections **A, B, C, D** and **E**.
2. Section A has 20 MCQs carrying 1 mark each.
3. Section B has 5 questions carrying 2 marks each.
4. Section C has 6 questions carrying 3 marks each.
5. Section D has 4 questions carrying 5 marks each.
6. Section E has 3 case based integrated units of assessment of 4 marks each with sub-parts of the value 1, 1 and 2 marks each respectively.
7. All questions are compulsory. However, an internal choice in 2 questions of 5 marks, 2 questions of 3 marks and 2 questions of 2 marks has been provided. An internal choice has been provided in the 2 marks questions of Section E.
8. Draw neat figures wherever required.

SECTION A		
This section consists of 20 questions of 1 mark each.		
1.	Find the area of the rhombus whose diagonals are 16 cm and 30 cm. a) 480 cm^2 b) 240 cm^2 c) 240 cm d) 92 cm^2	1
2.	Which of the following numbers will have 6 in the units place? a) 29^2 b) 56^2 c) 21^2 d) 78^2	1
3.	The standard form of 0.00000987 is: a) 9.87×10^{-6} b) 9.87×10^{-5} c) 0.987×10^{-7} d) 98.7×10^{-6}	1
4.	30 persons can reap a field in 17 days. How many more persons should be engaged to reap the same field in 10 days? a) 17 b) 21 c) 30 d) 51	1
5.	The volume of a rectangular box with sides $4p^2q^3$, $3pq$ and $2p^2q$ is: a) $24p^4q^4$ b) $24p^5q^4$ c) $24p^5q^5$ d) $24p^4q^5$	1
6.	Find the factors to be multiplied to get the product as $(-15x^2y)$. a) $-3y, -5x^2$ b) $-5y, 3x^2$ c) $-5y, -3x^2$ d) $5y, 3x^2$	1
7.	The volume of a cube of side $2a$ is: a) $4a^3$ b) $6a^3$ c) $8a^2$ d) $8a^3$	1
8.	The solution of $2x - 3 = 7$ is: a) $x = 2$ b) $x = -2$ c) $x = 5$ d) $x = -5$	1
9.	The curved surface area (in square cm) of a solid cylindrical wooden block with circumference of the base and height as 132 cm and 13 cm respectively is: a) 1190 b) 1450 c) 1716 d) 1910	1
		
10.	If $x^2 = 20.25$, find the value of x . a) 40.5 b) 2.5 c) 4.05 d) 4.5	1

11.	The value of $x^2 - 2x + 1$ when $x = 1$ is: a) 0 b) 4 c) 3 d) 5	1						
12.	Find the value of 3^{-2} . a) 9 b) $\frac{1}{9}$ c) -9 d) $-\frac{1}{9}$	1						
13.	If x and y vary directly, then the unknown value is: a) 45 b) 60 c) 180 d) 100	1						
	<table border="1" style="display: inline-table; vertical-align: middle;"> <tbody> <tr> <td>x</td> <td>90</td> <td>?</td> </tr> <tr> <td>y</td> <td>10</td> <td>20</td> </tr> </tbody> </table>	x	90	?	y	10	20	
x	90	?						
y	10	20						
14.	The reduction given on marked price is known as: a) Tax b) Profit c) Discount d) Loss	1						
15.	The greatest common factor of the terms $6abc$, $24ab^2$, $12a^2b$ is: a) $2ab$ b) $3ab$ c) $4ab$ d) $6ab$	1						
16.	The given line graph shows the sale of dolls from Monday to Saturday on a particular week. If the cost of one doll is ₹35, find the amount received from the sale of dolls on Saturday. a) ₹1050 b) ₹1400 c) ₹1750 d) ₹2100	1						
								
17.	Factorise $(-36y^3) \div 9y^2$. a) $-4y$ b) $4y$ c) $-4y^2$ d) $4y^2$	1						
18.	Find the value of m so that $5^{m+1} \times 5^5 = 5^{12}$. a) 7 b) 6 c) 4 d) 11	1						
	DIRECTION: In question numbers 19 and 20 a statement of Assertion (A) is followed by a statement of Reason(R). Choose the correct option.							
19.	Statement A (Assertion): The value of $(2^0 - 3^0)(3^0 + 4^0) = 0$. Statement R (Reason): For any non-zero integer a, $a^0 = 1$. a) Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of Assertion (A). b) Both Assertion (A) and Reason (R) are true and Reason (R) is not the correct explanation of Assertion (A). c) Assertion (A) is true but Reason (R) is false. d) Assertion (A) is false but Reason (R) is true.	1						
20.	Statement A (Assertion): The increase in one quantity increases other quantity too in direct proportion. Statement R (Reason): One quantity depends on another. a) Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of Assertion (A). b) Both Assertion (A) and Reason (R) are true and Reason (R) is not the correct explanation of Assertion (A). c) Assertion (A) is true but Reason (R) is false. d) Assertion (A) is false but Reason (R) is true.	1						

SECTION B												
This section consists of 5 questions of 2 marks each.												
21.	What is the least number to be multiplied to 135 to make it a perfect square?	2										
22.	If $5x - 4 = 3x$, find the numerical value of $19x - 7$.	2										
23.	If the marked price of an article is ₹600 and the rate of discount is 15%, find the discount amount. OR An article marked at ₹2000 is sold for ₹1920 after allowing a certain discount. Find the rate of discount.	2										
24.	If the length of one side of a square is $(5a - 2b)$ units, find its area.	2										
25.	The area of a trapezium shaped field is 480 m^2 , the distance between two parallel sides is 15 m and one of the parallel sides is 20 m. Find the measure of other parallel side. OR The circumference of the base of a right circular cylinder is 132 cm and height is 10 cm. Find the volume of the cylinder.	2										
SECTION C												
This section consists of 6 questions of 3 marks each.												
26.	Reena bought a mobile phone for ₹16,240. If the actual price of the mobile phone was ₹14,500, what percentage of GST was added on the actual price?	3										
27.	Simplify: $(a + b)(2a - 3b + c) - (2a - 3b)c$	3										
28.	Simplify: $\{5^{-1} + \left(\frac{5}{2}\right)^{-1}\}^{-1}$ OR Simplify: $3^{-3} \times \left(\frac{1}{3}\right)^{-5} \times \left(\frac{1}{3}\right)^{-2}$	3										
29.	The scale of a map is given as 1:30000000. Two cities are 4 cm apart on the map. Find the actual distance between them in kilometer.	3										
30.	Factorise $m^4 - 256$. OR Factorise $25a^2 - 4b^2 + 28bc - 49c^2$.	3										
31.	Draw a graph for the following. <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: center;">Deposit (in ₹)</td> <td style="text-align: center;">100</td> <td style="text-align: center;">200</td> <td style="text-align: center;">300</td> <td style="text-align: center;">500</td> </tr> <tr> <td style="text-align: center;">Simple Interest (in ₹)</td> <td style="text-align: center;">10</td> <td style="text-align: center;">20</td> <td style="text-align: center;">30</td> <td style="text-align: center;">50</td> </tr> </table>	Deposit (in ₹)	100	200	300	500	Simple Interest (in ₹)	10	20	30	50	3
Deposit (in ₹)	100	200	300	500								
Simple Interest (in ₹)	10	20	30	50								
SECTION D												
This section consists of 4 questions of 5 marks each.												
32.(i)	Find the area of a rhombus whose one side is 10 cm and one of the diagonals is 12 cm.	5										
(ii)	How much sheet of metal is required to make a closed cylindrical tank of diameter 7 cm and height 4cm? Also find the cost of the metal sheet required if 1 cm^2 metal costs ₹12.											

33.(i)	<p>Find the compound interest on a sum of ₹8000 for 2 years at 5% p.a. compounded annually.</p> <p>(ii) The cost of an electric scooter is ₹1,75,000. If its value depreciates at the rate of 20% per annum, find its price after 3 years.</p> <p style="text-align: center;">OR</p> <p>For a sum of ₹40,000, rate of interest is 8% compounded annually. Find the</p> <p>(i) interest after one year (ii) principal for the second year (iii) compound interest after a time period of 3 years</p>	5
34.(i)	<p>Find the factors of $3m^2 + 9m + 6$.</p> <p>(ii) Factorise the expression $39y^3 (50y^2 - 98) \div 26y^2 (5y + 7)$ and divide them as directed.</p> <p style="text-align: center;">OR</p> <p>(i) Factorise $4y^2 - 12y + 9$. (ii) Factorise and simplify $75^2 - 65^2$ using a suitable identity.</p>	5
35.(i)	<p>Find a Pythagorean triplet whose one member is 12.</p> <p>(ii) Find the square root of 4096 by long division method.</p>	5
SECTION E		
36.	<p>On the occasion of a festive season, shopkeeper offers discount to attract customers. Simran went to an electronic shop which gives 20% discount on the marked price of each item.</p>	
	(i) How will you find the sale price of an article if its marked price and discount (in ₹) are given?	1
	(ii) Find the sale price of a blender marked at ₹1200.	1
	<p>(iii) Find the total discount if she purchases an oven and LED TV marked at ₹7500 and ₹37,500 respectively?</p> <p style="text-align: center;">OR</p> <p>Find the amount paid by her for purchasing a refrigerator and a music system marked at ₹45,000 and ₹8000 respectively.</p>	2

37.	<p>A farmer has a field in the shape that is shown in the figure. The length of the side $CD = 24$ m, $AD = 15$ m, $BC = 13$ m, $AE = BF = 12$ m. The sides AE and BF are perpendicular to side DC.</p>		
	(i) What shape does the field $ABCD$ resemble?		1
	(ii) If the farmer bought 61 m of wire to fence the boundary of field $ABCD$, what is the length of side AB ?		1
	(iii) Find the area of field $ABCD$.	<p>OR</p> <p>Find the cost of fencing the field at the rate of ₹12 per metre.</p>	2
38.	<p>The following line graph shows the number of labourers hired for a project during various years.</p>		
	(i) In which year the number of labourers were minimum?		1
	(ii) Find the rise in the number of labourers hired from 2001 to 2004.	<p>OR</p> <p>Find the decrease in the number of labourers hired from 2003 to 2006.</p>	2
	(iii) Find the sum of the number of labourers hired in the years 2004 and 2006.		1