

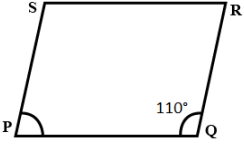
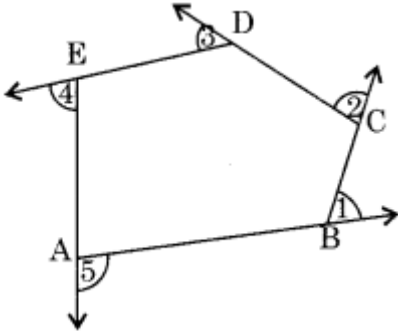


	a) $63/-27$ b) $-63/27$ c) $63/27$ d) $-63/18$	
6.	The one's digit of the cube of the number 129 is – a) 1                      b) 0                      c) 8                      d) 9	(1)
7.	Find the smallest number by which the number 675 must be divided to obtain a perfect cube - a) 26                      b) 24                      c) 25                      d) 23	(1)
8.	Find the number of digits in the square root 27225(without any calculation). a) 1                      b) 2                      c) 3                      d) 4	(1)
9.	Solve: $\frac{5Y}{63} + \frac{2}{7} = 6$ a) 74                      b) 63                      c) 72                      d) 49	(1)
10.	The sides of a hexagon are produced in order. Which of the following is the sum of its exterior angles? a) $540^\circ$ b) $180^\circ$ c) $720^\circ$ d) $360^\circ$	(1)
11.	Which one is not a quadrilateral? a) Rhombus                      b) Triangle                      c) Square                      d) Rectangle	(1)
12.	$\angle A$ and $\angle B$ are two adjacent angles of parallelogram ABCD. If $A = 70^\circ$ , then $B = ?$ a) $110^\circ$ b) $180^\circ$ c) $70^\circ$ d) $90^\circ$	(1)
13.	Choose the correct answer from the statements given below: 1. Diagonals of a rectangle are perpendicular bisectors of one another. 2. Diagonals of a rhombus are perpendicular bisectors of each another. 3. A parallelogram's diagonals are perpendicular bisectors of one another. a) Only statement 2 is true. b) Statements 1, 2 and 3 are true. c) Statements 2 and 3 are true. d) Statements 1 and 2 are true.	(1)
14.	A coin is flipped in the air. What is the probability of getting a tail.	(1)

	a) 0                      b) $\frac{1}{2}$ c) 1                      d) 2	
15.	Pictorial representation of data using symbols is known as: a) Bar graph              b) Pictograph              c) Pie chart              d) None of these	(1)
16.	Double bar graphs display _____ sets of data simultaneously. a) Four                      b) Three                      c) Two                      d) No	(1)
17.	What is raw data? (a) Organized data (b) Unorganized data (c) Data on bar graph (d) Data on a pie chart	(1)
18.	Radius of the circle in pie chart depends on (a) Range of date (b) Frequency of data (c) Median of data (d) None	(1)
19.	Find the least number that must be subtracted from 5607 so as to get a perfect square. a) 131                      b) 130                      c) 135                      d) None of these	(1)
20.	Sum of squares of two numbers is 145. If square root of one number is 3 , find the other number- a) 8                      b) 64                      c) 9                      d) 81	(1)
21.	Express $35^2$ as the sum of two consecutive numbers a) 35 and 36                      b) 612 and 613 c) 614 and 615                      d) 365 and 366	(1)
22.	A Pythagorean triplet whose smallest member is 8. a) 8, 15, 17                      b) 8, 6, 10 c) 5, 12, 13                      d) Cannot be defined	(1)
23.	2025 plants are to be planted in a garden in such a way that each row contains as many plants as the number of rows. Find the number of rows and the number of	(1)

	plants in each row. a) 45 and 45 respectively c) Both (a) and (b)	b) 35 and 45 respectively d) None of the above	
24.	Which of the following numbers is not a perfect cube? a) 15625                      b)13824                      c)12167                      d)13754		(1)
25.	The cube of an odd natural number is – a)an even number                      b)a odd number c)maybe even, may be odd                      d)a prime number		(1)
<b>Case study based question:</b>			
Question no. 26 to 28 is based on case study, read the passage and give the answer for the following questions An equation is the equality of the values of two expressions. In the equation $2x - 3 = 7$ , the two expressions are $2x - 3$ and 7. In most examples that we have come across so far, the RHS is just a number. But this need not always be so; both sides could have expressions with variables. For example, the equation $2x - 3 = x + 2$ has expressions with a variable on both sides; the expression on the LHS is $(2x - 3)$ and the expression on the RHS is $(x + 2)$ .			
26.	How many terms are there in the expression $(2x - 3)$ a) 1                      b) 2                      c) 3                      d) None of these		(1)
27.	For the equation $(2x - 3) = (x + 2)$ at $x = 1$ , a) L.H.S= R.H.S for $x = 1$ b) L.H.S $\neq$ R.H.S for $x = 1$ c) Can,t say d) None of these		(1)
28.	Find the value of $x$ from the equation $2x - 3 = x + 2$ a) 5                      b) -5                      c) 1                      d) -1		(1)
29.	<b>Assertion (A) – Two adjacent sides of a rectangle are equal. The name of the quadrilateral is square</b> <b>Reason (R) – a square is a quadrilateral with four right angles</b> a) Both A and R are true and R is the correct explanation of A b) Both A and R are true but R is not the correct explanation of A c) A is true but R is false d) A is false but R is true		(1)
30.	<b>Assertion (A) – The root of the equation <math>3y + 4 = 5y - 4</math> is 2</b>		(1)

	<p><b>Reason (R) – The value of the variable which makes left hand side equal to right hand side in the given equation is called the solution or the root of the equation</b></p> <p>a) Both A and R are true and R is the correct explanation of A  b) Both A and R are true but R is not the correct explanation of A  c) A is true but R is false  d) A is false but R is true</p>	
<b>SECTION – B</b>		
31.	Solve for x $\frac{5}{2}x - 14 = x + 2$	(2)
32.	Find the number of sides of a regular polygon whose each exterior angle is $72^{\circ}$	(2)
33.	<p>See the following pattern:</p> <p>1,2, 3, 4  [Two non square numbers between the two square numbers <math>1 (=1^2)</math> and <math>4(=2^2)</math>]  4,5, 6, 7, 8, 9  [Four non square numbers between the two square numbers <math>4 (=2^2)</math> and <math>9(=3^2)</math>]  9,10, 11, 12, 13, 14, 15, 16 (<math>= 4^2</math>)  [Six non square numbers between the two square numbers <math>9 (=3^2)</math> and <math>16(=4^2)</math>]  16,17, 18, 19, 20, 21, 22, 23, 24, 25 (<math>= 5^2</math>)  [Eight non square numbers between the two square numbers <math>16 (=4^2)</math> and <math>25(=5^2)</math>]  From the above pattern, Find that non square numbers between <math>x^2</math> and <math>(x+1)^2</math></p>	(2)
34.	<p>State true or false. Justify your answer using any one example.</p> <p>(i) A cube of a number end with two zeros.  (ii) If square of a number ends with 5, then its cube ends with 25.</p>	(2)
<b>SECTION – C</b>		
35.	<p>Find the smallest number by which each of the following numbers must be multiplied to obtain a perfect cube.</p> <p>(i) 243      (ii) 72</p>	(3)
36	Simplify the linear equations $5(p - 9) - 2(p + 9) + 5(p + 4) = 0$ , find the value of p.	(3)
37	<p>Define rational number. Show that rational numbers are not closed under division.</p> <p>Give one example.</p>	(3)

38	<p>In the parallelogram PQRS, given if <math>m\angle Q = 110^\circ</math>, find all the other angles.</p> 	(3)
39	<p>A die is labelled using the letters of the word “INDIAN”. If this die is rolled, find the probability of getting following letters on its upper face.</p> <p>a) I      b) A      c) P</p>	(3)
40	<p>Is 2352 a perfect square? If not, find the smallest multiple of 2352 which is a perfect square. Find the square root of the new number.</p>	(3)
SECTION – D		
41	<p>Simplify <math>\left(\frac{30}{12} + \frac{5}{3}\right) - \left(\frac{25}{12} - \frac{7}{4}\right) + 1</math></p>	(4)
42	<p>Simplify and solve the following linear equations.</p> <p>(i) <math>0.25(4f - 3) = 0.05(10f - 9)</math></p> <p>(ii) <math>\frac{x}{2} + \frac{5}{7} = \frac{x}{4} + \frac{1}{7}</math></p>	(4)
43	<p>Radha Draw a polygon on the floor, using a piece of chalk. (In the figure, a pentagon ABCDE is shown)</p> <p>Radha want to know the total measure of angles, i.e, <math>m\angle 1 + m\angle 2 + m\angle 3 + m\angle 4 + m\angle 5</math>. Starting at A. Radha Walks along AB. On reaching at B, she turn through an angle of <math>m\angle 1</math>, walking along BC she reached at C, again she turns through an angle of <math>m\angle 2</math> to walk along CD. She continues to move in this manner, until returns to side AB. she would have in fact made one complete turn.</p>  <p>(i) give the sum of all exterior angles(<math>m\angle 1 + m\angle 2 + m\angle 3 + m\angle 4 + m\angle 5</math>)</p> <p>(ii). if <math>m\angle 2 + m\angle 3 + m\angle 4 = 216^\circ</math>, find the sum of <math>m\angle 1</math> and <math>m\angle 5</math>.</p>	(4)

	(iii) if each exterior angle are $72^{\circ}$ , find each interior angle. (iv) Draw all possible diagonals in given pentagon ABCDE?															
44	<p>On a particular day, the sales (in rupees) of different items of a baker's shop are given below.</p> <table border="1"> <thead> <tr> <th>Food item</th> <th>Sales(In Rs.)</th> </tr> </thead> <tbody> <tr> <td>ordinary bread</td> <td>320</td> </tr> <tr> <td>fruit bread</td> <td>80</td> </tr> <tr> <td>cakes and pastries</td> <td>160</td> </tr> <tr> <td>biscuits</td> <td>120</td> </tr> <tr> <td>others</td> <td>40</td> </tr> <tr> <td>Total</td> <td>720</td> </tr> </tbody> </table> <p>(i) Tabulate the data in terms of "In Fraction" and "Central Angle" (ii) Draw a pie chart for this data.</p>	Food item	Sales(In Rs.)	ordinary bread	320	fruit bread	80	cakes and pastries	160	biscuits	120	others	40	Total	720	(4)
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45	<p>Find the cube root of each of the following numbers by prime factorisation method.</p> <p>(i) 27000                      (ii) 15625</p>	(4)														
46	<p>Find the square roots of 5776 and 70.56 by the method of long division method.</p>	(4)														