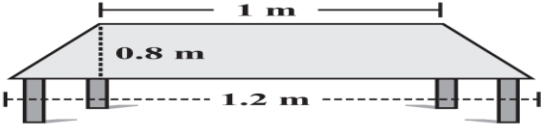
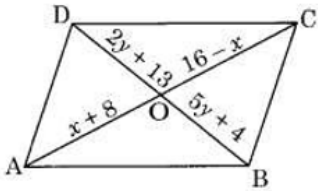


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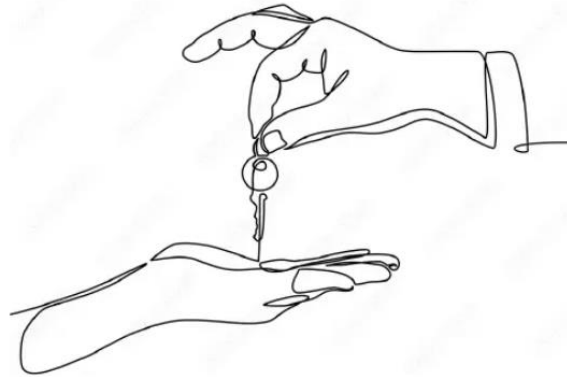
| Q.NO   | SECTION-A MCQ /VSA                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | MARK |
|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| Q.1:-  | How many natural numbers lie between $13^2$ and $14^2$ .<br>A) 24                                      B) 25                                      C) 26                                      D) 27                                                                                                                                                                                                                                                                                         | 1    |
| Q.2:-  | Solve: $8x + 4 = 3(x - 1) + 7$<br>A) 1                                      B) -1                                      C) 0                                      D) none of these                                                                                                                                                                                                                                                                                                          | 1    |
| Q.3:-  | The value of $(2^{-1} - 4^{-1})^{-1}$<br>A) $1/4$ B) $1/8$ C) 4                                      D) 1                                                                                                                                                                                                                                                                                                                                                                                  | 1    |
| Q.4:-  | The product of a rational number and its reciprocal is .....<br>(a) 0                                      (b) 1                                      (c) -1                                      (d) None of these                                                                                                                                                                                                                                                                        | 1    |
| Q.5:-  | The sum of parallel sides of a trapezium is 16 cm. If its height is 4 cm, then its area is.....<br>(a) $8\text{ cm}^2$ (b) $64\text{ cm}^2$ (c) $4\text{ cm}^2$ (d) $32\text{ cm}^2$                                                                                                                                                                                                                                                                                                       | 1    |
| Q.6:-  | If Ram's present age is 3 years and Shyam is twice Ram's present age. What will be Shyam's age after 10 years?<br>a) 16                                      b) 17                                      c) 18                                      d) 19                                                                                                                                                                                                                                   | 1    |
| Q.7:-  | In a quadrilateral the angles are $40^\circ, 120^\circ, 10^\circ$ and x. Find x.<br>a) $40^\circ$ b) $120^\circ$ c) $190^\circ$ d) $180^\circ$                                                                                                                                                                                                                                                                                                                                             | 1    |
| Q.8:-  | what is the formula for the sum of interior angle of 'n' sided polygons.<br>a) $nx180^\circ$ b) $(n-1) \times 90^\circ$ c) $(n-2) \times 180^\circ$ d) $(n-2) \times 360^\circ$                                                                                                                                                                                                                                                                                                            | 1    |
| Q.9:-  | What is the sum of all the angles in any pentagon?<br>a) $90^\circ$ b) $540^\circ$ c) $270^\circ$ d) $240^\circ$                                                                                                                                                                                                                                                                                                                                                                           | 1    |
| Q.10:- | The sales price of a printer is ₹13000. The sales tax charged on it is at the rate of 12%. The amount Vinod will have to pay if he buys it is:<br>(a) ₹ 11460                                      (b) ₹ 13560                                      (c) ₹ 14560                                      (d) ₹ 15460                                                                                                                                                                           | 1    |
| Q.11:- | The unit digit in the square of the number 2644 is<br>(a) 4                                      (b) 6                                      (c) 8                                      (d) 2.                                                                                                                                                                                                                                                                                              | 1    |
| Q.12:- | The cube of an odd natural number is<br>(a) even (b) odd (c) may be even, may be odd (d) prime number.                                                                                                                                                                                                                                                                                                                                                                                     | 1    |
| Q.13:- | Out of 40 students in a class, 25% passed. How many students passed ?<br>(a) 20                                      (b) 10                                      (c) 30                                      (d) 40                                                                                                                                                                                                                                                                        | 1    |
| Q.14:- | A polygon with minimum number of sides is<br>a) Pentagon                                      b) Square                                      c) Triangle                                      d) Angle                                                                                                                                                                                                                                                                                     | 1    |
| Q.15:- | How many diagonals do a convex quadrilateral has?<br>a) one                                      b) two                                      c) three                                      d) four                                                                                                                                                                                                                                                                                         |      |
| Q.16:- | If the diagonals of a quadrilateral bisect each other at right angles, it will be a<br>a) rhombus                                      b) trapezium                                      c) rectangle                                      d) kite                                                                                                                                                                                                                                         |      |
| Q.17:- | Assertion: The sum of any two rational numbers is a rational number.<br>(Reason) : There are no two rational numbers whose sum is not a rational number<br>assertion (A) and reason (R) are true and reason (R) is the correct explanation of assertion (A).<br>(b) Both assertion (A) and reason (R) are true but reason (R) is not the correct explanation of assertion (A).<br>(C) Assertion (A) is true but reason (R) is false.<br>(d) Assertion (A) is false but reason (R) is true. |      |
| Q.18:- | Assertion (A) – The sum of the measures of all the four angles of a quadrilateral is $360^\circ$<br>Reason (R) – In geometry a quadrilateral is a four-sided polygon, having four edges (sides) and four corners (vertices)<br>(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 but reason (R) is not the correct explanation of assertion (A).<br>(C) Assertion (A) is true but reason (R) is false.<br>(d) Assertion (A) is false but reason (R) is true.                                                                                                              |   |
| Q.19:-                               | If 6 is added to 3 times of a number, it becomes 15. This statement in the form of an equation is<br>(a) $3x + 6 = 15$ (b) $3x - 6 = 15$ (c) $3x + 15 = 6$ (d) $3x/6 = 15$ .                                                                                                                                                            |   |
| Q.20:-                               | How many diagonals does a regular hexagon have ?<br>(a) 2 (b) 0 (c) 4 (d) 9                                                                                                                                                                                                                                                             |   |
| <b>SECTION-B (SA)</b>                |                                                                                                                                                                                                                                                                                                                                         |   |
| Q.13:-                               | If $(-3)^{m+1} \times (-3)^5 = (-3)^9$ , then the value of m is?                                                                                                                                                                                                                                                                        | 2 |
| Q.14:-                               | Solve : $15(y - 4) - 2(y - 9) + 5(y + 6) = 0$                                                                                                                                                                                                                                                                                           | 2 |
| Q.17:-                               | Find the area of a rhombus whose diagonals are of lengths 16cm and 10.2 cm.<br>OR<br>The shape of the top surface of a table is a trapezium. Find its area if its parallel sides are 1 m and 1.2 m and perpendicular distance between them is 0.8 m.  | 2 |
| Q.18:-                               | $\frac{3}{7} \times \left(\frac{-4}{5}\right) \times \left(\frac{-14}{-}\right) \times \left(\frac{15}{16}\right)$                                                                                                                                                                                                                      | 2 |
| Q.19:-                               | Find the values of x and y in the following parallelogram<br>                                                                                                                                                                                        | 2 |
| <b>SECTION-C LONG ANSWER (6X=18)</b> |                                                                                                                                                                                                                                                                                                                                         |   |
| Q.22:-                               | Simplify : $\frac{25 \times t^{-4}}{5^{-3} \times 10 \times t^{-8}} \quad (t \neq 0)$                                                                                                                                                                                                                                                   | 3 |
| Q.23:-                               | $\left(\frac{1}{2}\right)^{-2} + \left(\frac{1}{3}\right)^{-2} + \left(\frac{1}{4}\right)^{-2}$                                                                                                                                                                                                                                         | 3 |
|                                      | $\left(\frac{4}{9}\right)^{2m-1} = \left(\frac{4}{9}\right)^6 \times \left(\frac{4}{9}\right)^3$                                                                                                                                                                                                                                        |   |
|                                      | $\therefore \frac{2x+1}{3x-2} = \frac{9}{10}$                                                                                                                                                                                                                                                                                           |   |
|                                      | A number consists of two digits whose sum is 8. If 18 is added to the number its digits are reversed. Find the number                                                                                                                                                                                                                   |   |
|                                      | Find (a) The sum of measures of interior angles of an octagon.<br>The measure of each exterior angle of a regular polygon of 12 sides.                                                                                                                                                                                                  |   |
| <b>Section D(4 x 05=20)</b>          |                                                                                                                                                                                                                                                                                                                                         |   |
|                                      | During a mass drill exercise, 6250 students of different schools are arranged in rows such that the number of students in each row is equal to the number of rows. In doing so, the instructor finds out that 9 children are left out. Find the number of children in each row of the square.                                           |   |

|  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |
|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
|  | <p>. A mother and her two daughters got a room constructed for Rs. 62,000. The elder daughter contributes <math>\frac{3}{8}</math> of her mother's contribution while the younger daughter contributes <math>\frac{1}{2}</math> of her mother's share. How much do the three contribute individually?</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |
|  | <p>. In a parallelogram PQRS, the bisectors of <math>\angle P</math> and <math>\angle Q</math> meet at O. Find <math>\angle POQ</math>.</p> <p>OR</p> <p>PQRS is a rhombus. Write any three properties of PQRS. The diagonals of PQRS meet at O. If <math>PO = 4</math> cm and <math>OQ = 3</math> cm, then find the value of <math>(PR + SQ)</math>.</p>                                                                                                                                                                                                                                                                                                                                                                                                                             |  |
|  | <p><b>Maria invested ₹ 8,000 in a particular business. She would eventually be paid interest at 5% per annum compounded annually. Find out</b></p> <p><b>(i) The amount credited against her name, particular at the end of the second year</b></p> <p><b>(ii) The interest for the third year</b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |
|  | <p style="text-align: center;"><b>Section E(3 x 4=12)</b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |
|  | <p>On the occasion of festivity season, shopkeeper offers discount to attract the customers. Simran went to an electronic shop which gives 20% Diwali discount on the marked price of each item</p> <p>(i) How will you find the sale price of an article if its marked price and discount (in ₹) on it are given? 1</p> <p>(ii) Find the sale price of a blender marked at ₹ 1200. 1</p> <p>(iii) Find the total discount, if she purchases an oven and LED marked at ₹ 7500 and ₹ 37500 respectively?</p> <p>OR</p> <p>Find the amount paid by her for purchasing a refrigerator and a music system marked at ₹ 45000 and ₹ 8000 respectively?</p>                                                                                                                                  |  |
|  | <p>Smart watches are a big innovation in the wearable industry, performing too many functions. The most common now a days is to count the number of steps. This has a big impact on health.</p> <div data-bbox="509 1384 764 1673" data-label="Image"> </div> <p>Gunjan noticed the number of steps she walked on her smart watch in the evening and found it to be '23,328'.</p> <p>Based on the above information, answer the following questions:</p> <p>(i) Is the given number a perfect cube? 1</p> <p>(ii) If not, then what is the smallest number to be multiplied to make it a perfect cube? 2</p> <p style="text-align: center;"><b>OR</b></p> <p>What is the cube-root of the resulting number? 2</p> <p>(iii) Find the one's digit in the cube of the number 9999. 1</p> |  |

Anima left one-half of her property to her daughter, one-third to her son and donated the rest to an educational institute. If the donation was worth Rs. 1,00,000.

Based on the above situation, answer the following questions:



(i) Write the linear equation formed in the above situation.

1

(ii) How much money did Anima have?

2

**OR**

How much money educational institute have?

(iii) How much money did Anima's son and daughter have?