MATHS

BOOKS - UNIQUE MATHS (HINGLISH)

PRACTICE FOR SUBQUESTIONS

1 Marks Questions

1. Suppose B={6,12,18,24,30,36}, then n(B)= ?

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2. A={2,4,6} and B={1,2,3,4,5} then write $A \cup B$

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3. A={11,12}, B={14,15} find $A \cup B = ?$

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4. If A ={1,2,3,4} and U={1,2,3,4,5,6,7,8} is universal set, then write the complement of set A .

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5. Write in symbolic form :

x is the element of set A .

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6. If A={3,5,9}, B={5,7,9,11} then show the set $A \cap B$ in venn diagram.

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7. Express $\frac{23}{36}$ in decimal form.

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8. Find the rational factor of $\sqrt{27}$

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9. Find the value of |4-9|

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10. Find the rationalizing factor of $\sqrt{18}$

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11. Write the conjugate pair of $7 + \sqrt{3}$

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12. Simiplify $10\sqrt{5} - 7\sqrt{5} + 3\sqrt{5}$

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13. Write the conjugate pair of $\sqrt{3} - \sqrt{6}$.

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14. Write the simplest form of sqrt $\sqrt{150}$

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15. $5\sqrt{5} + 15\sqrt{5}$ =?

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16. Write whether $\sqrt{225}$ is surd or not.

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17. Write the simplest form of $\sqrt{490}$

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18. Divide and write the answer in simplest form.

$\sqrt{225} \div \sqrt{2}$

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19. Find the value of |16-2|

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20. Find the value of $|7| \times |-4| \times |4-9|$

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21. Classify given pair of surds into like surds and unlike surds.

$5\sqrt{22}, 7\sqrt{33}$

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22. Classify given pair of surds into like surds and unlike surds.

$\sqrt{52}, 5\sqrt{13}$

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23. Write the given polynomial $x^2 + 3x - 5$ in coefficient form.

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24. Write the (5,2,0,3,2) polynomial in index form by using y as a variable.

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25. Write the degree of given polynomial.

$3x^4 + 5x + x^5 + 3$

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26. Write the polynomial $3m^2 + 5m^3 - 8m + 2$ in co-efficient form and also state its degree.

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27. Write the polynomial (5,0,0,0,-1,0) in index form.

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28. Multiply this polynomials $x^2 - 2x + 1$ and 2x

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29. $-7y + y^5 + 3y^3 - \frac{1}{2} + 2y^4 - y^2$ write the polynomials in standard form.

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30. Write the given polynomial in coefficient form :

$-\frac{2}{3}m^3 - 5m^2 - 7m - 1$

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31. There are 'a' tress in the village. If the number of trees, increase by 'b' every year, then how many tress will be there after 'x' years.

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32. For the parade there are y students in each row and x such rows are formed . Then how many students are there for the parade in all ?

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33. If $p(x) = x^3$ then find $p(0)$

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34. If $p(x) = x^4 - 2x^2 - x$ then find p(-2)

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35. Write the coefficient form (2,0,0,-4) in the index form using an variables.

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36. Write the coefficient form (3,0,7,0,9,64) in the index form using an variables.

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37. Comparison of ratios

$\frac{4}{9}, \frac{7}{8}$

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38. Comparison of ratios

$\frac{\sqrt{13}}{\sqrt{8}}, \frac{\sqrt{17}}{\sqrt{15}}$

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39. What is mean proportion of 4 and 25.

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40. If the $\frac{a}{b} = \frac{3}{5}$ then find the ratio $\frac{3a}{2b}$

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41. If $\frac{m}{n} = \frac{11}{4}$ then $\frac{m-n}{n} = ?$

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42. If $x : 18 : : 5 : 3$ find the value of x

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43. By using x and y as a variable , write two linear equations in two variables.

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44. If $4x + 3y = 39$ and $3x + 4y = 10$ then what is value of x-y ?

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45. $5x + 3y = 6$, check whether (0,2) is solution of this equation .

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46. Write two linear equation in p and q.

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47. Using variable form the linear equation in two variables.

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48. Write the solution of the equation $x + y = 7$ and how many solutions can we have for given equation ?

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49. Frame the given linear equation in two variable : Soham is elder than Sarita by two years.

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50. Ajays age is younger than Vijay by 3 years and the sum of their ages is 25 years What is Ajay's age ?

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51. Compute the income tax payable by Smt. Safiya who is 44 years old and has a taxable income is Rs. 5,82,000

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52. Write the dates of start and of a finacical year in our country.

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53. Write the formula to find compound interest.

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54. Write the dates of start and of a finacical year in our country.

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55. Give the full form of PAN

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56. Write the full of GST.

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57. If person's total yearly income is Rs. 12,00,000 who is 50 years old, then what will be his taxable income ?

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58. State any two different sources of income on which an income tax is levied.

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59. Write any two sources of various kinds of savings.

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60. What are different types of taxes and name them .

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61. What is the taxable income for senior citizen.

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62. Examples of direct tax (any two)

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63. Examples of indirect tax (any two)

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64. If financial year is 2014-15 then write the assessment year.

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65. How much education cess of 2% is levied on income tax of Rs. 2,00,000 ?

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66. What is investment ?

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67. How much secondary and higher education cess at 1% is levied on income tax Rs. 50,000

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68. Find the mean from following data

$$\frac{25+\square+27+23+25}{5}=\frac{130}{5}=\square$$

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69. Without solving find the median

51,60,53,55,57,52,59

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70. Measures of central tendency

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71. If class mark is 15 and class widht is 10, then find the class.

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72. Find the class mark of class 21.5 to 25.5

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73. Find class widht of class 10.5 to 15.5

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74. 35,40,55,45,45,55,60,45,55,60,45,75,65,90. Find the mode of the class.

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75. Write upper and lower class limit of calss 27.5 to 30.5

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76. State the type of data in the given information.

`In village Nandpur, the information collected from every house regarding student not attending the school.

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77. State the type of data in the given information . The information of students was gathered from the school record and send to the head office, as it was to be sent urgently.

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78. Find the median :59,68,70,74,75,75,80

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79. Find mode : 19,19,5,20,25,15,20,15

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2 Marks Questions

1. If n(A)=15, $n(A \cup B) = 29, n(A \cap B) = 7$ then $n(B)$= ?

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2. A={1,2,3,4,5,6,7,8}

B={2,4,6,8}

Represent set A and B in Venn diagram

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3. Given : $n(A) = 5, (B) = 6, n(A \cup B) = 9$ for calculation of $n(A \cap B)$. Complete the activity.

$n(A \cap B) = n(A) + n(B) - \square$

$= 5 + \square - 9$

$= \square - 9$

$n(A \cap B) = \square$

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4. Multiply and write in simplest form.

$3\sqrt{12} \times 7\sqrt{15}$

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5. Solve : $\left|5+\frac{x}{4}\right|=5$

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6. Simplify : $\sqrt{50}-\sqrt{98}$

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7. Rationalize : $\frac{2}{\sqrt{5}}$

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8. Convert 0.18 in $\frac{p}{q}$ form.

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9. Write the value of,

$|15 \times 3 - (7 \times 2) \times 4|$

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10. Write the solution of $\left|x - \frac{5}{4}\right| - \frac{3}{2}$

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11. $8\sqrt{5} + \sqrt{20} - \sqrt{125}$

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12. Rationalize the denominator

$$\frac{1}{\sqrt{3} - \sqrt{2}}, \frac{1}{3\sqrt{2}}, \frac{3}{\sqrt{8}}$$

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13. $\left(3\sqrt{2} - \sqrt{3}\right)\left(4\sqrt{3} - \sqrt{2}\right)$

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14. Multiply :

$(\sqrt{5} - \sqrt{7})\sqrt{2}$

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15. Write any three rational numbers between -2 and 0.

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16. Express as rupees using decimal

536 paise

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17. Express as rupees using decimal

5 paise

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18. Arrange the rational numbers in ascending order.

$$\frac{-3}{5}, \frac{7}{-10}, \frac{-5}{6}$$

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19. Arrange the rational numbers in ascending order.

$\frac{2}{3}, \frac{3}{4}, \frac{5}{6}, \frac{-7}{12}$

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20. If side of triangles are $b-2a+2c, a+3b-3c$ and $2a-b+c$, then find the perimeter .

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21. Multiply :

$x^2 - 2, x^3 + 2x^2 + 1$

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22. Find the value of $p(x) = 2x^2 - 3x + 5$ when x=2

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23. Solve :

$\left(5m^2 + 3m - 4\right) + \left(3m^2 + 5m + 7\right) - \left(2m^2 - 4m\right)$

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24. Find the value of $p(y) = 2y^3 - 2y + \sqrt[3]{27}$ for y=-3

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25. Add the polynomial

$x^3 - 2x - 9, 5x^3 - 2x - 9$

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26. Subtract the polynomial $2x + 3x^2$, from $5x^2 + 4x - 3$

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27. Find the factors of polynomial

$2x^2 + x - 1$

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28. Find the factors of polynomial

$3y^2 - 2y - 1$

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29. Which polynomials should be added to $x^2 - 5x + 3$ to get the polynomial $2x^2 + 3x - 5$

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30. There are 'y' a mango trees in each row in an orchard. If there 'x' rows, then how many mango trees in all are there in the orchard.

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31. $6x^2 + 5x - 6$

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32. Find the third proportional to 9 and 12.

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33. Convert the ratio $\frac{7}{8}$ in percentage:

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34. Fill in the blanks

$$\frac{x}{5} = \frac{y}{3} = \frac{x+y}{\square} = \frac{3x+5y}{\square}$$

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35. If $\frac{p}{q} = \frac{5}{7}$ then

$$\frac{3p}{4q} = \square$$

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36. If $\frac{p}{q} = \frac{5}{7}$ then

$$\frac{p^2+q^2}{q^2} = \square$$

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37. If $\frac{a}{b} = \frac{7}{3}$ then find the ratio $\frac{a+7b}{7b}$

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38. What is ratio of perimeter of circle and area of circle if radius is 7 cm.

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39. $\frac{a}{b} = \frac{5}{9}$ find values of $\frac{9a-5b}{5a+9b}$

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40. Measures of angle of triangle are in ratio 1:1:2 . What are values of all the angles ?

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41. If ratio of your marks in English first unit test and second unit test is 2:3 , if test paper is of 30 marks. Then find marks in both test separately.

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42. Three person can build a small house in 8 days to build the same house in 6 days, how many person are required ,

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43. 24 bananas were distributed between Shubham and Anil in the ratio 3:5 , then how many bananas did Shubham get ?

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44. a,b,c are in continued proportion , if a=3 and c=27 then find b.

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45. Compare the pair of the ratios :

$\frac{9.2}{5.1}, \frac{3.4}{7}$

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46. Compare the pair of the ratios :

$\frac{5}{18}, \frac{17}{21}$

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47. If $\frac{a}{b} = \frac{c}{d}$ then write its componendo and dividendo form.

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48. If $\frac{m}{n} = \frac{5}{2}$ then find values $\frac{3m + 4n}{3m - 4n}$

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49. If $\frac{a}{b} = \frac{2}{3}$ then find the values of $\frac{b}{a}$

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50. If $\frac{a}{b} = \frac{2}{3}$ then find the values of $\frac{4a + 3b}{3b}$

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51. The cost of an eraser is 80 paise and the cost of pencile is rupees 2 what is the ratio of their cost in simplest form.

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52. Express $8\frac{1}{3} : 6\frac{1}{4}$ into percentage

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53. Express $8.5 : 10$ into percentage

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54. $3x + 5y = 9$ and $4x + 3y = 7$ then find $x + y$

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55. Solve : $x + y = 14, x - y = 2$

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56. The sum of two numbers is 42 and their difference is 16. Write the equations .

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57. In equation $8x + 3y = 11$, put $y = 3x - 2$ and find the values of x and y.

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58. In equation $3x - 4y = 7$ and $5x + 3y = 3$ make the coefficient of x equal .

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59. Solve :

$m + 2n = 7$ and $2m + 2n = 10$

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60. In $\Delta ABC, m\angle A = m\angle B = x$ and $m\angle C = y$, also $x + y = 90$ then find $\angle A$

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61. Length of a rectangle is more than 5 by its breadth and preimeter s 16 cm, then find length and breadth of the reactangle.

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62. $3x - 4y = 7$ What is the value of x ?

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63. $5x + 4y = 17$ What is the value of x ?

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64. $2x - 7y = 7$

$y = 3x + 22$

solve by substitution method and find the value of x ?

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65. In Rhombus adjacent angles are in ratio 4:5. Find greater angle.

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66. Write any two linear equation and find only one unknown by elimination method.

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67. Complete the following table

Person	Age	Taxable income
(i) Ram	25	2,34,400
(ii) Rahim	50	5,34,000

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68. If Ramesh's annual income is Rs 3000. He spends 90% of his income, then find his total savings ?

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69. Is income tax applicatble for income upto Rs. 2,50,000 . How many income tax is payable for income slabs from 25,000 to 5,00,000 . Also write the percentage of education cess, secondary and higher secondary eduation cess ?

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70. Distinguish between direct tax and indirect tax.

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71. Write the uses of PAN card

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72. Write any four main heads of income for computation of income tax.

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73. Mr. Mulay's annual income is 3,00,000 rupees. He pays 30,000 for tax. If total cess is 3% then what is his total tax ?

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74. Rewa spends 75% of her income and saves Rs. 2000 per month. What is her monthly income ?

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75. How much education cess is payable on the income tax of Rs. 12,000 ?

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76. Sumedh invested Rs. 25,000 in mutual fund. He got Rs. 26,000 after 1 yr. Find out percentage gain ?

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77. Miss Varsha is 26 years old and her taxable income is Rs. 2,30,000. What income tax does she pay ?

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78. Mean of 5 numbers is 50. Out of which mean of 4 numbers is 46, then the 5^{th} number.

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79. Find mode :90,55,67,55,75,75,40,35,55,95

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80. Following 10 observations are arranged in ascending order.

$2, 3, 5, 9, x + 13, 14, 16, 19, 20$.

If the median of the data is 11, then find the value of x.

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81. The marks (out of 100) obtained by you in 6 class test are 99,100,95,60,70,90 find median .

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82. If class marks is 20 and class width is 6. Find the class.

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83. $\sum f_i x_i = 900$. Total observation is a 45. What is $\overline{X}$?

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84. The mean of the five numbers is 50 out of which the mean of the 4 numbers is 46, find the fifth number ?

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85. The weight of 10 students in kg is given below then find mode :

$40, 35, 42, 43, 37, 35, 37, 37, 42, 37$

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