RAVI MATHS TUITION CENTER , WHATSAPP - 8056206308

Linear Equations In One Variable

8th Standard

Mathematics

74 x 1 = 74

1) The Solution of the equation ax+b = 0 is

(a) $x = \frac{a}{b}$ (b) x = -b (c) $x = \frac{-b}{a}$ (d) $x = \frac{b}{a}$

2) If 8x -13 = 25 + 16x, then x is

(a) a fraction (b) an integer (c) a rational number (d) Cannot be solved

3) Linear equation in one variable has

(a) only one variable with any power (b) only one term with a variable

(c) only one variable with power 1 (d) only constant term

4) If a and b are positive integers, then solution of the equation ax = b has to be always

(a) positive (b) negative (c) One (d) Zero

5) Which of the following is a linear expression?

(a) x^2 +2 + y (b) y + y^2 + 3 (c) 4 (d) 1 + z

6) A linear equation in one variable has

(a) only one solution (b) no solution (c) two solutions

(d) more than two solutions

7) The digit in the ten's place of a two-digit number is 3 more than the digit in the unit's place. If the digit at unit's place be b. Then, the number is

(a) 11b + 30 (b) 10b+30 (c) 11b+3 (d) 10b+3

8) Arpita's present age is thrice of Shilpa. If Shilpa's age 3 yr ago was x. Then, Arpita's present age is

(a) 3(x - 3) (b) 3x + 3 (c) 3x - 9 (d) 3(x + 3)

9) In the equation $\frac{x}{4} + \frac{5}{2} = \frac{-3}{4}$, transposing $\frac{5}{2}$ to RHS, we get:

(a) $\frac{x}{4} = \frac{-3}{4} + \frac{5}{2}$ (b) $\frac{x}{4} = \frac{-5}{2} + \frac{3}{4}$ (c) $\frac{x}{4} = \frac{-3}{4} + (\frac{-5}{2})$ (d) none of these

10) In the equation 3x = 4 - x, transposing (-x) to LHS, we get

(a) 3x - x = 4 (b) 3x + x = 4 (c) -3x + x = 4 (d) -3x - x = 4.

11) If $\frac{x}{3} + 1 = \frac{7}{15}$, then which of the following is correct?

(a) $\frac{x}{3} = \frac{7}{15} - 1$ (b) $\frac{x}{3} = \frac{-7}{15} + 1$ (c) $\frac{x}{3} = \frac{-7}{15} - 1$ (d) none of these

12) If 7x + 15 = 50, then which of the following is the root of the equation?

(a) -5 (b) $\frac{65}{7}$ (c) 5 (d) $\frac{1}{5}$

13) If $\frac{2}{5}x =$ 4; then which of the following is the value of x?

(a) 10 (b) -10 (c) $\frac{-8}{5}$ (d) $\frac{8}{5}$

14) If the sum of two consecutive numbers is 71 and one of them being x, then which of the following is the other number?

(a) x + (x + 1) = 71 (b) x + (x + 2) = 71 (c) x + x = 71 (d) none of these.

15) Two years ago, my age was 'x' years so, 5 years ago my age was:

(a) (x + 7) years (b) (x - 2 - 5) years (c) (x - 5) years (d) (x - 3) years.

16) 10 years ago, I was 'x' years old. After 10 years, my age will be:

(a) (x + 20) years (b) (x - 20) years (c) (x + 10) years (d) (x - 10) years

17) If the sum of two consecutive numbers is 15 and the greater of them is x then the smaller number is:

(a) 16 (b) 14 (c) 8 (d) 7

18) If 'x' is an even number, then which of the following is the next odd number?

(a) x + 1 (b) x + 2 (c) x - 1 (d) x - 2

19) Which of the following is not an equation?

(a) $x + \frac{1}{y} = 1 + xy$ (b) $\frac{2x}{5} + 7y - \frac{5y}{x}$ (c) $0 - 7x - \frac{4}{5}y$

(d) 2x - 3y + 7 = -1

20) Which of the following is a root of $\frac{1}{2}x = -5$?

(a) 10 (b) -10 (c) 0 (d) $-\frac{5}{2}$

21) Which of the following is the value of x in $\frac{3}{4}x - 8 = 18$?

(a) $-\frac{81}{4}$ (b) $\frac{81}{4}$ (c) -36 (d) 36

22) Which of the following is the value of x in $(\frac{1}{x} - 1)^2 = 4$?

(a) $\frac{1}{3}$ (b) $-\frac{1}{5}$ (c) $-\frac{1}{3}$ (d) $\frac{1}{5}$

23) Which of these is the same as 9x + 7 = 8?

(a) $9x = \frac{8}{7}$ (b) 9x + 7 - 7 = 8 - 7 (c) 9x + 7 - 8 = 8 - 8 (d) $\frac{9x}{9} + \frac{7}{7} = \frac{8}{8}$

24) The equation 2x - 1 = 5 is identical to:

(a) 3x - 1 = 5 (b) 4x - 2 = 10 (c) x = 2 (d) 4x + 2 = 10

25) The standard form of a linear equation in one variable x is

(a) ax+b=0 (b) $ax^2 + bx + c = 0$ (c) $ax^3 + bx^2 + cx + d = 0$

(d) $ax^4 + bx^3 + cx^2 + dx + e = 0$.

26) Of the following, the linear equation in one variable x, is

(a) $\frac{4}{x} = \frac{x}{4}$ (b) $\frac{1}{x} + \frac{1}{x-1}$ =1 (c) $\frac{x}{2} = \frac{x}{3} = \frac{1}{4}$ (d) $X^2 + 2x + 3 = 0$.

27) The degree of the equation
X^2 - 2x + 1 = x2 - 3 is

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

28) The statement 'on adding 10 in a number, the number becomes 20' in the form of an equation is

(a) x - 10 = 20 (b) x + 10 = 20 (c) 10x = 20 (d) $\frac{x}{10}$ =20

29) If 9 is added to a number, it becomes 25. This statement in the form of an equation is

(a) x + 9 = 25 (b) x - 9 = 25 (c) 9x = 25 (d) $\frac{x}{9}$ = 25.

30) If 15 is subtracted from a number, it becomes - 5. This statement in the form of an equation is

(a) x + 15 = - 5 (b) x - 15 = 5 (c) x + 15 = 5 (d) x - 15 = - 5.

31) Seven times a number is 42. This statement in the form of an equation is

(a) x+7=42 (b) 7x=42 (c) $\frac{x}{7}$ =42 (d) x-7=42

32) A number when divided by 5 gives 6. This statement in the form of an equation is

(a) x-5=6 (b) x+5=6 (c) $\frac{x}{5}$ =6 (d) 5x.= 6.

33) A number when subtracted from 40 results into 15. This statement in the form of an equation is

(a) 40 - x = 15 (b) x - 40 = 15 (c) 40 + x = 15 (d) 40x = 15.

34) If 6 is added to 3 times of a number, it becomes 15. This statement in the form of an equation is

(a) 3x + 6 = 15 (b) 3x - 6 = 15 (c) 3x + 15 = 6 (d) $\frac{3x}{5}$ =15.

35) On subtracting 30 from two times a number, we get 56. This statement in the form of an equation is

(a) 2x - 30 = 56 (b) 2x + 30 = 56 (c) 30 - 2x = 56 (d) $\frac{30}{2x}$ =56

36) The root of the equation z ÷ 4 = - 8 is

(a) 3 (b) -32 (c) 12 (d) 4

37) The root of the equation 3x = $\frac{z}{4}$ -x is

(a) $\frac{10}{27}$ (b) $\frac{10}{21}$ (c) -$\frac{5}{7}$ (d) $\frac{5}{7}$

38) The root of the equation
2x + 3 = 2(x - 4)is

(a) 2 (b) 4 (c) 0 (d) does not exist.

39) The solution of the equation $\frac{5}{x}$ =2 is

(a) 10 (b) $\frac{2}{5}$ (c) $\frac{5}{2}$ (d) $\frac{1}{10}$

40) The largest number of the three consecutive numbers is x + 1. Then, the smallest number is

(a) x + 2 (b) x + 1 (c) x (d) x - 1.

41) If x is an even number then the consecutive even number is

(a) x+1 (b) x + 2 (c) 2x (d) x-1

42) x is an odd number. The largest odd number preceding x is

(a) x - 1 (b) x - 2 (c) x-3 (d) x-4

43) The difference of two numbers is 21. The larger number is x. The smaller number is

(a) 21 +x (b) 21-x (c) x - 21 (d) -x - 21

44) In a two digit number, the unit's digit is x and the ten's digit is y. Then, the number is

(a) 10y + x (b) 10x + y (c) 10y-x (d) 10x-y

45) When 9 is added to two times a number, we get 67. The number is

(a) 25 (b) 27 (c) 29 (d) 31

46) The root of the equation - $\frac{5}{4x}$ =15 is

(a) $\frac{1}{12}$ (b) -$\frac{1}{12}$ (c) $\frac{1}{20}$ (d) -$\frac{1}{20}$

47) The value of x in $\frac{3}{4}$= 7 -x is

(a) 4 (b) 3 (c) $\frac{7}{3}$ (d) 7

48) $\frac{3}{4}$ part of a number is 5 more than its $\frac{2}{3}$ part. This statement in the form of an equation is

(a) $\frac{2}{3}$ x-$\frac{3}{4}$ x=5 (b) $\frac{2}{3}$ x-5=$\frac{3}{4}$ x (c) $\frac{3}{4}$ x=$\frac{2}{3}$ x+5 (d) $\frac{3}{4}$ x-5-$\frac{2}{3}$ x

49) The value of x in -$\frac{2}{3}$ =2x is

(a) $\frac{1}{3}$ (b) -$\frac{1}{3}$ (c) 3 (d) -3

50) The root of the equation 5x - 8 = 7 is

(a) 1 (b) 2 (c) 3 (d) -3

51) The root of the equation x + 3 = 5 is

(a) 1 (b) 2 (c) -1 (d) -2

52) The root of the equation x - 8 = 2 is

(a) 2 (b) 8 (c) 6 (d) 10

53) The root of the equation 3x + 8 = 14 is

(a) 1 (b) 2 (c) -1 (d) $\frac{1}{2}$

54) The root of the equation 2y = 5(3 + y) is

(a) 5 (b) $\frac{1}{5}$ (c) -5 (d) -$\frac{1}{5}$

55) The root of the equation $\frac{y}{3}$ -7=11 is

(a) 54 (b) -54 (c) 18 (d) -18

56) The root of the equation 14 - x = 8 is

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

57) The root of the equation $\frac{5x}{3}$ = 30 is

(a) 9 (b) 12 (c) 15 (d) 18

58) The root of the equation 3y + 4 = 5y - 4 is

(a) 1 (b) 2 (c) 3 (d) 4

59) The root of the equation $\frac{7}{x}$ = 3 is

(a) $\frac{7}{3}$ (b) $\frac{3}{7}$ (c) 3 (d) 7

60) The root of the equation 3x + 4 = 13 is

(a) 1 (b) 2 (c) 3 (d) 4

61) The root of the equation 9z - 15 = 9 - 3z is

(a) 1 (b) 2 (c) 3 (d) 4

62) The root of the equation $\frac{4x}{7}$ -12=0 is

(a) 7 (b) 14 (c) 21 (d) -21

63) The root of the equation $3x = \frac{20}{7}$ -x is

(a) $\frac{7}{5}$ (b) $\frac{5}{7}$ (c) $-\frac{7}{5}$ (d) $-\frac{5}{7}$

64) The root of the equation 2y = 5 (7 - y) is

(a) 5 (b) -5 (c) 3 (d) -3

65) The root of the equation
(2x - 1) + (x -1) = x + 2 is

(a) 1 (b) 2 (c) -1 (d) -2

66) The root of the equation
13x - 14 = 9x + 10 is

(a) 1 (b) 2 (c) 3 (d) 4

67) The root of the equation
11x - 5 - x + 6 = 2x + 17 is

(a) 1 (b) 2 (c) 3 (d) 4

68) The root of the equation $\frac{2}{3}$ y=$\frac{5}{12}$ is

(a) $\frac{8}{5}$ (b) $\frac{5}{8}$ (c) 5 (d) 8

69) The root of the equation 7 (x - 1) = 21 is

(a) 1 (b) 2 (c) 3 (d) 4

70) The root of the equation $\frac{3}{2}$ x=-27 is

(a) 6 (b) 12 (c) 18 (d) -18

71) If two angles are complementary and one angle is 10° greater than the other, then the smaller angle of the two is

(a) 40° (b) 50° (c) 90° (d) 180°

72) If two angles are complementary and one angle is double the other, then the larger angle is

(a) 60° (b) 90° (c) 120° (d) 180°

73) Twice a number is as much greater than 30 as the three times of the number less than 60. The number is

(a) 6 (b) 9 (c) 12 (d) 18

74) One number is greater than the other number by 3. The sum of two numbers is 23. The two numbers are

(a) 13,10 (b) 14,9 (c) 12,11 (d) 15,8

9 x 1 = 9

75) In a linear equation, ...power of the variable appearing in the equation is one.

76) Any value of the variable, which makes both sides of an equation equal is known as a ..... of the equation.

77) A term of an equation can be transposed to the other side by changing its.....

78) If on dividing a number by 18, the result is -144, then the number is.....

79) 19 is subtracted from the product of P and 14. The result is 21. The value of P is

80) After 18 yr, Saurabh will be 4 times as old as he is now. His present age is.....

81) The sum of two consecutive multiples of 10 is 210. The smaller multiple is.....

82) If 4t - 3 - (3t + 1)= 5t - 4, then the root of t is.....

83) An equation which, when reduced to a simple form, involve no power of the variable quantity higher than _____ is called a simple equation.

13 x 1 = 13

84) 13z + 5 =9 is the linear equation in one variable

(a) False (b) True

85) $\frac{7p}{3} + 6 = 1$ When +6 is transposed to RHS, then it $\frac{7p}{3} = \frac{1}{6}$

(a) True (b) False

86) When we add same number on both sides of an equation. Then, balance between LHS and RHS is not disturbed.

(a) False (b) True

87) When we divide by same non-zero number on both sides (i.e. LHS and RHS) of an equation. Then, balance is disturbed.

(a) True (b) False

88) RHS means the expression on the right of the equality sign and LHS means the expression on the left of the equality sign.

(a) False (b) True

89) In the equation 13x - 4 = 9, transposing -4 to RHS, we get 13x = 5.

(a) True (b) False

90) In the equation 2x = 4 - x, transposing -x to LHS, we get 3x = 4

(a) False (b) True

91) If 16x = 80, then 18x = 90

(a) False (b) True

92) If x is an even number, then the next even number is 2(x + 1).

(a) True (b) False

93) Two numbers differ by 40, when each number is increased by 8, the bigger becomes thrice the lesser number. If one number is x, then the other number is (40 - x).

(a) True (b) False

94) In a two-digit number, the unit's place digit is x. If the sum of digits be 9, then the number is (10x - 9).

(a) True (b) False

95) The number of boys and girls in a class in the ratio 5 : 4. If the number of boys is 9 more than the number of girls, then the number of boys is 9.

(a) True (b) False

96) Two different equations can never have the same answer.

(a) True (b) False

12 x 1 = 12

97) 7

98) -5

99) $\frac{31}{6}$

100) 4

101) $\frac{3x-8}{2x} = 1$

(1) -2

(2) 7

(3) 5(x-1)-2(x+ 8)=0

(4) x = -39

(5) x = -4

102) $\frac{5x}{2x-1} = 2$

103) $\frac{2x-3}{4x+5} = \frac{1}{3}$

104) $\frac{8}{x} = \frac{5}{x-1}$

105) $\frac{x}{3} + \frac{1}{4} = \frac{x}{2} - \frac{1}{5}$

106) $\frac{x-2}{x+1} = \frac{1}{2}$

107) $\frac{x+1}{2x-1} = \frac{1}{3}$

108) $\frac{x-1}{8} = \frac{2x+3}{15}$

(6) 8

(7) 1

(8) x = 5

(9) $x = \frac{27}{10}$

(10) $\frac{Q2x+5}{3.5x-3} \frac{2}{5}$

(11) 8x-7 - 3x=6x-2x- 3

(12) $\frac{x}{5} = \frac{x-1}{6}$

82 x 2 = 164

109) Solve the following equations x - 2 = 7

110) Solve the following equations y + 3 = 10

111) Solve the following equations 6 = Z + 2

112) Solve the following equations $\frac{3}{7} + x = \frac{17}{7}$

113) Solve the following equations 6x = 12

114) Solve the following equations $\frac{t}{5} = 10$

115) Solve the following equations $\frac{2x}{3} = 18$

116) Solve the following equations 1.6 = $\frac{y}{1.5}$

117) Solve the following equations 7x - 9 = 16

118) Solve the following equations 14y - 8 = 13

119) Solve the following equations 17 + 6p =9

120) Solve the following equations $\frac{x}{3} + 1 = \frac{7}{15}$

121) Solve the following equations and check your result. 3x = 2x +18

122) Solve the following equations and check your result. 5t- 3 = 3t- 5

123) Solve the following equations and check your result. 5x + 9 = 5 + 3x.

124) Solve the following equations and check your result. 4z+ 3= 6+ 2z

125) Solve the following equations and check your result. 2x- 1= 14- x.

126) Solve the following equations and check your result. 8x+ 4= 3 (x- 1)+ 7

127) Solve the following equations and check your result. $x = \frac{4}{5}(x + 10)$

128) Solve the following equations and check your result. $\frac{2x}{3} + 1 = \frac{7x}{15} + 3$

129) Solve the following equations and check your result.$2y + \frac{5}{3} = \frac{26}{3} - y$

130) What should be added to twice the rational number $\frac{-7}{3}$ to get $\frac{3}{7}$?

131) The sum of three consecutive multiples of 11 is 363. Find the multiples.

132) The perimeter of a rectangle is 13 cm. If its width is $2\frac{3}{4}$ cm, then find its length.

133) The present age of Prabha's mother is three times the present age of Prabha. After 5 years their ages will add to 66 years. Find their present ages.

134) Ramani has 3 times as many two-rupee coins as she has five-rupee coins. If she has in all a sum of Rs 77, then how many coins of each denomination does she have?

135) Solve 2x - 3 = x + 2

136) Solve 5x + $\frac{7}{2} = \frac{3}{2}x - 14$

137) Find the Solution of $\frac{5}{4} - 7y = \frac{-23}{4}$

138) Solve $\frac{t}{2} = 10$

139) Solve 13y + 8 =18

140) Solve $\frac{x}{5}$ +1 =2

141) Find the root the following equations $3x - \frac{1}{3} = \frac{2}{3}$

142) Find the root the following equations $2p + 9 = \frac{-17}{7}$

143) Find the solution of the following equations and also check your answer 0.33x - $\frac{99}{100}$ =-0.66

144) Find the solution of the following equations and also check your answer $\frac{x}{7}$ +5 = 5

145) Solve $\frac{x}{6} - 5 = \frac{1}{10}$

146) Solve $\frac{-5x}{9} + 2 = \frac{-1}{6}$

147) The length of a rectangle is 16 cm more than the breadth. If the perimeter of the rectangle is 96 cm. Find the length and breadth of the rectangle. Also, verify your solution.

148) Alok has a total of Rs.1050 as currency notes in the denominations of Rs. 50, Rs. 20 and Rs. 10. The ratio of the number of Rs 50 notes and Rs. 20 notes is 9 : 8 respectively. If he has 61 notes in total. Then, how many notes of each denomination he has?

149) Solve the following equations and check your result. $3m = 5m - \frac{8}{5}$

150) Sum of two numbers is 95. If one exceeds the other number by 37. Find the numbers.

151) Three consecutive integers are such that when they are taken in increasing order and multiplied by 2, 3 and 4, respectively and added then sum is 92. Find these integers.

152) What should be added to thrice of rational number $\frac{5}{9}$ to get $\frac{2}{3}$

153) What should be subtracted from one-third of $\frac{2}{9}$ to get $\frac{-1}{9}$

154) A rational number is such that when we multiply this rational number with $\frac{-2}{3}$ and$-\frac{1}{6}$ subtracted , then we get.$\frac{1}{9}$ Find the 369 rational number.

155) Solve $2y + \frac{1}{3} = \frac{10}{3} - y$

156) Find the value of a, if 6(3a -1)+ 3(2a + 3)= 1-7a.

157) Find the value of m and check your answer. 3(5m-7)-2 (9m -11)= 4(8m-13)-17

158) If $0.12 + \left(\frac{0.5+z}{2}\right) = \frac{z}{3} + 1.5$ then find the value of z and Check your answer.

159) The numerator of a fraction is 6 less than the denominator. If 1 is added to both numerator and denominator, it becomes $\frac{1}{2}$ then find the fraction.

160) Jitendra left one-third of his property to his son, one-fourth to his daughter and the remaining to his wife. If the wife's share was worth Rs. 320000, then how much money did Jitendra have?

161) Five times the cost price of a notebook is equal to four times the selling price of the notebook. If the selling price is Rs.5 more than the cost price, then find both selling price and cost price of the notebook.

162) If the length and breadth of a rectangular field are in the ratio 6:4. Find the length and breadth, if cost of fencing the field at the rate of Rs. 80 per metre is Rs. 16000.

163) Sudha's age is five times as age of Sandhya. Ten years later, Sudha's age will be thrice the age of Sandhya. Find the age of Sudha after 10 yr.

164) Solve $\frac{5(1-x)+3(1+x)}{1-2x} = 8$

165) Find the solution of $\frac{y-(4-3y)}{2y-(3+4y)} = \frac{1}{5}$.

166) Solve $\frac{y+2}{3} - \frac{y+1}{5}\frac{y-3}{4} - 1$

167) $\frac{1}{x+1} + \frac{1}{x+2} = \frac{2}{x+10}$

168) Find the solution of 2y + 18 = 30.

169) Solve $\frac{13}{5} - 5x = 13$

170) What should be subtracted from thrice the rational number $\frac{-13}{4}$ to get $\frac{5}{8}$?

171) Find the solution of $\frac{3x+4}{2x+5} = 1$

172) Solve 0.25 (8a - 0.5) = 7.5

173) A rational number x such that when we multiplied by $\frac{3}{4}$ and added 5, then it became $\frac{1}{2}$ find the rational number.

174) What should be added to five -seventh of rational number $\frac{-3}{5}$, so that it becomes $\frac{3}{7}$

175) Find the solution of $\frac{1}{x} - \frac{3}{x}\frac{5}{2x} - 3$

176) Solve 0.44 t - 1.05 = 2 (0.71 t -0.01) + 1.11

177) Find the Solution of $\frac{3m-5}{m-3}(4m-6) = 2m-3$

178) Identify the linear equations in one variable from the following.x^2 + 1 = 4, y+y^2 = 3,z+4 = z^2 +z^3 5x= 1, $\frac{4}{3}$ = y, 4z-12 = $\frac{5}{7}$

179) A number is such that it is as much greater than 65 as it is less than 91. Find the number.

180) Answer the following:
(i) Is px^2 - qy = 1 a linear equation?
(ii) Is $\frac{1}{x} + \frac{1}{y} = \frac{1}{xy}$ a linear equation?

181) The sum of two numbers is 74. If one of the numbers is 10 more than the other, then what are the numbers?

182) The sum of three consecutive numbers is 57. Find the numbers.

183) Two whole numbers are in the ratio of 2: 5. If their difference is 66, then find whole numbers.

184) Kaveri has a total of Rs 590 as currency notes in the denominations of Rs 50, Rs 20 and Rs 10. The ratio of the number of Rs 50 notes and ao notes is 3: 5. If she has a total of 25 notes, how many notes of each denomination she has?

185) A rational number is such that when you multiply it by $\frac{2}{5}$ and add $\frac{2}{3}$ to the product, you get $\frac{7}{15}$. What is the rational number?

186) The digits of a two-digit number differ by 3. If the digits are interchanged, and the resulting number is added to the original number, we get 121. Find the original number.

187) The sum of the digits of a two-digit number is 13. If the digits are interchanged, and the resulting number is added to the original number, then we get 143. What is the original number?

188) One of the two digits of two-digit number is three times the other. If we interchange the digits and add the resulting number to the original number, we get 132. Find the number.

189) 'A' is twice as old as 'B'. Five years ago A's age was three times B's age. Find their present ages.

190) The length and breadth of a rectangular field are in the ratio 6: 4. Find the length and breadth if the cost of fencing the field at the rate of Rs 80 per metre is Rs 16,000.

144 x 3 = 432

191) Solve the following linear equation $\frac{x}{2} - \frac{1}{5} = \frac{x}{3} + \frac{1}{4}$

192) If you Subtract $\frac{1}{2}$ from a number and multiply the result by $\frac{1}{2}$ you get $\frac{1}{8}$ what is the number?

193) The perimeter of a rectangular swimming pool is 154 m. Its length is 2 m more than twice its breadth. What are the length and breadth of the pool?

194) The base of an isosceles triangle is $\frac{4}{3}$ the perimeter of the triangle is $4\frac{2}{15}$ what is the length of the remaining equal sides?

195) Sum of two numbers is 95. If one exceeds the other by 15, find the numbers

196) Two numbers are in the ratio 5 : 3. If they differ by 18, what are the numbers?

197) Three consecutive integers add upto 51. What are these integers?

198) The sum of three consecutive multiples of 8 is 888. Find the multiples.

199) Three consecutive integers are such that when they are taken in increasing order and multiplied by 2, 3 and 4 respectively, they add upto 74. Find these numbers.

200) The ages of Rahul and Hamon are in the ratio 5 : 7. Four years later, the sum of their ages will be 56 yr. What are their present ages?

201) The number of boys and girls in a class are in theratio 7 :5. The number of boys is 8 more than the number of girls. What is the total class strength?

202) Fifteen years from now Ravi's age will be four timeshis present age. What is Ravi's present age?

203) Baichung's father is 26 yr younger than Baichung's grandfather and 29 yr older than Baichung. The sum of the ages of all the three is 135yr.What is the age of each one of them?

204) A rational number is such that when you multiply it by $\frac{5}{2}$ and add $\frac{2}{3}$ to the product, you get $-\frac{7}{12}$ What is the number?

205) Lakshmi is a cashier in a bank. She has currency notes of denominations Rs. 100, Rs 50 and Rs. 10, respectively. The ratio of the number of these notes is 2 : 3 : 5. The total cash with Lakshmi is Rs. 400000. How many notes of each denomination does she have?

206) Amina thinks of a number and subtracts 5/2 from it. She multiplies the result by 8. The result now obtained is 3 times the same number she thought of. What is the number?

207) A positive number is 5 times another number. If 21 is added to both the numbers, then one of the new number becomes twice the other new number. What are the numbers?

208) Sum of the digits of a two-digit number is 9. When we interchange the digits, it is found that the resulting new number is greater than the original number by 27. What is the two-digits number?

209) One of the two digits of a two digit number is three times the other digit. If you interchange the digits of this two-digit number and add the resulting number to the original number, you get 88. What is the original number?

210) Shobo's mother's present age is six times Shobo's present age. Shobo's age five years from now will be one-third of his mother's present age. What are their present ages?

211) There is a narrow rectangular plot, reserved for a school, in Mahuli village. The length and breadth of the plot are in the ratio 11 : 4. At the rate Rs.100 per metre, it will cost the village panchayat Rs. 75000 to fence the plot. What are the dimensions of the plot?

212) Hasan buys two kinds of cloth materials for school uniforms, shirt material that costshim Rs. 50 per metre and trouser material that costshim Rs. 90 per metre. For every 3 m of the shirt material, he buys 2 m of the trouser material. He sells the materials at 12% and 10%profit, respectively. His total sale is Rs. 36600.How much trouser material did he buy?

213) Half of herd of deer are grazing in the field and three-fourth of the remaining are playing nearby. The rest 9 are drinking water from the pond. Find the number of deer in the herd.

214) A grandfather is ten times older than his granddaughter. He is also 54 yr older than her. Find their present ages.

215) Aman's age is three times his son's age. Ten years ago he was five times his son's age. Find their present ages.

216) Solve the following linear equation $\frac{3t-2}{3}+\frac{2t+3}{2}=t+\frac{7}{6}$

217) The denominator of a rational number is greater than its numerator by 8. If the numerator is increased by 17 and the denominator is decreased by 1, the number obtained is 3/2. Find the rational number.

218) The ages of Hari and Harry are in the ratio 5: 7. Four years from now, the ratio of their ages will be 3 : 4. Find their present ages.

219) Solve the following equation $\frac{3y+4}{2-6y}=\frac{-2}{5}$

220) Solve the following equation $\frac{8x-3}{3x}=2$

221) Simplify and solve the following linear equation 0.25 (4f- 3) = 0.05 (10f- 9).

222) Simplify and solve the following linear equation 15 (y- 4)- 2 (y- 9)+ 5 (y+ 6)= 0.

223) Simplify and solve the following linear equations 3 (t- 3)= 5 (2t+ 1).

224) Solve the following linear equation $\frac{n}{2}-\frac{3n}{4}+\frac{5n}{6}=21$

225) Solve the following linear equation $x+7-\frac{8x}{3}=\frac{17}{6}-\frac{5x}{2}$

226) Solve the following linear equation $\frac{x-5}{3}=\frac{x-3}{5}$

227) Solve the following equation $\frac{9x}{7-6x}=15$

228) Solve the following equation $\frac{z}{z+15}=\frac{4}{9}$

229) Solve the following equation $\frac{7y+4}{y+2}=\frac{-4}{3}$

230) Simplify and solve the following linear equations:
3 (5z - 7) - 2 (9z - 11) = 4 (8z - 13) - 17

231) The difference between two whole numbers is 66. The ratio of the two numbers is 2 : 5. What are the two numbers?

232) Deveshi has a total of Rs. 590 as currency notes in the denominations of Rs.50, Rs.20 and Rs.10. The ratio of the number of Rs. 50 notes and Rs. 20 notes is 3:5. If she has a total of 25 notes, how many notes of each denomination she has?

233) Find the solution of 2x – 3 = 7

234) Solve 2y + 9 = 4

235) Solve $\frac{x}{3} + \frac{5}{2} = -\frac{3}{2}$

236) Solve $\frac{15}{4} - 7x = 9$

237) Solve $\frac{6x+1}{3} + 1 = \frac{x-3}{6}$

238) Solve $5x - 2\ (2x - 7) = 2\ (3x - 1) + \frac{7}{2}$

239) Solve $\frac{x+1}{2x+3} = \frac{3}{8}$

240) Present ages of Anu and Raj are in the ratio 4:5. Eight years from now the ratio of their ages will be 5:6. Find their present ages.

241) A steamer goes downstream from one point to another in 7h. It covers the same distance upstream in 8 h. It the speed of stream be 2 km/h, find the speed of the steamer in still water and the distance between the ports.

242) Solve $\frac{17-3x}{5} - \frac{4x+2}{3} = 5 - 6x + \frac{7x+14}{3}$

243) Solve $\frac{2x+1}{3x-2} = \frac{9}{10}$

244) The denominator of a rational number is greater than its numerator by 2. If the numerator is increased by 3 and the denominator is decreased by 1, the number obtained is $\frac{7}{6}$ Find the rational number.

245) Divide 84 into two parts such that half of the first part is 4 less than the half of the other part.

246) Find a number whose fifth part increased by 30 is equal to its fourth part increased by 23.

247) If a triangle has two equal sides and each 4 m less than three times the third side. Find the dimensions of the triangle, if its perimeter is 55 m.

248) Solve $x - \frac{2x+8}{3} = \frac{1}{4}\left(x - \frac{2-x}{6}\right) - 3$

249) A man sold an article of Rs 495 and gained 10% on it. Find the cost price of the article.

250) Divide Rs. 1380 among Atul, Ravi and Kishan, so that the amount Atul receives is 5 times as much as Kishan's share and is 3 times as much as Ravi's share.

251) The length of a rectangle exceeds its breadth by 18 cm. If length and breadth are each increased by 6 cm, then area of the new rectangle will be 336 cm more than that of the given rectangle. Find the length and breadth of the given rectangle.

252) Solve the following equations and check your result $\frac{1}{3} \times -\frac{1}{2} = 4$

253) Solve the following equations and check your result $\frac{x}{5} + 11 = \frac{1}{15}$

254) Solve 13(y -4) -4(y -6) +5(y - 9) =0.

255) Solve $-\frac{2x+8}{3} = \frac{1}{4}\left(x - \frac{2-x}{6}\right)$

256) Simplify and solve the following linear equation 3(5y - 7) - 2 (9y - 11) = 4 (8y - 13) - 17 Also check you answer

257) The organisers of an essay competition decide that a winner in the competition gets a prize of Rs. 500 and a participant, who does not win, gets a prize of Rs.100. The total prize money distributed is 4800. Find the number of winners, if the total number of participants is 36.

258) The sum of digits of a two-digit number is 17. On reversing its digits, the new number is 9 more than the original number. Find the number.

259) Divide 400 into two parts such that $\frac{1}{3}$ rd of the first part is 40 less than other.

260) The difference between Navin's age and Jatin's age is 15 yr. 5 yr ago, Navin's age was twice Jatin's age. Find their present ages.

261) The sum of three consecutive even numbers is 138. Find the greatest of these numbers.

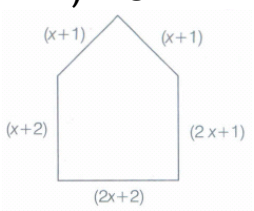
262) The sum of three consecutive odd numbers is 219. Find the least of these odd numbers.

263) Show that y = 4 is a solution of the equation y + 7 - $\frac{8y}{3} = \frac{17}{6}\frac{5y}{8}$

264) Solve for x, $\frac{3x-5}{17} + \left[\frac{11-x}{76} - \frac{3}{4}\right] = \frac{4+x}{2} - 13$

265) Find the root of the equation $\frac{(2+y)(7-y)}{(5-y)(4+y)} = 1$

266) For what value of x, the perimeter of shape is 77 cm?



267) solve $\frac{x}{2} + \frac{x}{4} + \frac{x}{5} + 10000 = x$

268) Radhika takes some flowers in a basket and visits three temples one by one. At each temple, she offers one half of the flowers from the basket. If she is left with 3 flowers at the end, find the number of flowers she had in the beginning.

269) The present age of father is four times the age of his son. After 10 yr, age of father will become three times the age of his son. Find their present ages.

270) Anushka and Aarushi are friends. They have equal amount of money in their pockets. Anushka gave of her money to Aarushi as her birthday gift. Then, Aarushi gave a party at a restaurant and cleared the bill by paying half of the total money with her. If the remaining money in Aarushi's pocket is Rs.1600, then find the money gifted by Anushka.

271) The sum of three consecutive odd natural numbers is 69. Find the prime number out of these numbers.

272) The sum of three consecutive numbers is 156. Find the number, which is a multiple of 13 out of these numbers.

273) The base of an isosceles triangle is $\frac{4}{5}$ cm,The perimeter of the triangle is $5\frac{3}{13}$ What is the length of either of the remaining equal sides?

274) Find a number, whose fifth part increased by 30 is equal to its fourth part decreased by 30.

275) Madhulika thought of a number, doubled it and added 20 to it. On dividing the resulting number by 25, she gets 4. What is the number?

276) Solve for x $\frac{5}{4x-5} = 1$

277) Solve for x. $x - \frac{x}{4} - \frac{x}{12} - \frac{x}{36} = 46$

278) Find the value of x which satisfy $\frac{3-5x}{3-4x} = \frac{5x-1}{4x-1}$

279) Find the solution of $\frac{2m-(7-5m)}{9m-(3+4m)} = \frac{7}{6}$

280) If n = -1 is a solution of equation $\frac{2n+a}{3n-2} = \frac{5}{3}$ then find the value of a.

281) For what non-zero value of t. $\frac{25}{3t} + 2(3t-5) = \frac{1}{9t} + 3(2t+2)$

282) Divide 40 into two parts such that $\frac{1}{4}$ th of one part is equal to two less than the $\frac{1}{2}$ th of the other part.

283) In an examination, a student requires 40% marks to pass, If a student gets 302 marks and fail by 18 marks, Find the total marks.

284) If sum of two digits of a two digit number is 15 and the difference between them is 3. What is the product of the digits?

285) In an examination, a student scores, 4 marks for every correct answer and losses 1 mark for every wrong answer 4 students attempted all the 200 questions and scored 200 marks. Find the number of questions, he answered correctly.

286) Find the solution and also check the answer. $\frac{(m-3)}{2} + 5 = \frac{5m-9}{3} - 3 + 4$

287) Find the solution and also check the answer. 2(4y+6)+3(3-y)=2(7+2y)+4

288) What should be subtracted from twice the rational number $\frac{-5}{3}$ to get $\frac{2}{5}$?

289) The perimeter of a rectangle is 17 cm. If its width is $3\frac{3}{4}$ cm, then find its length.

290) The sum of three consecutive multiples of 7 is 63. Find these multiples.

291) Solve: $\frac{3}{2}x - \frac{7}{2} = 5x + 14$

292) Solve: $\frac{x+3}{6} + 1 = \frac{6x-1}{3}$

293) Solve: 2(3x + 1) - 5x = $\frac{7}{2}$ - 2(2x + 7).

294) Solve: $\frac{x-1}{2x+3} = \frac{5}{8}$

295) The denominator of a rational number is greater than its numerator by 3. If the numerator is increased by 16 and the denominator is decreased by 1, then the number obtained is $\frac{5}{3}$. Find the rational number.

296) Present ages of Shaloo and Preeti are in the ratio 5: 4. 5 years from now the ratio of their ages will be 6: 5. Find their ages.

297) Show that x = 4 is a solution of the equation: $x + 7 - \frac{8x}{3} = \frac{17}{6} - \frac{5x}{8}$

298) Solve $\frac{x}{3} + \frac{1}{5} = \frac{x}{2} - \frac{1}{4}$

299) Solve for x: $\frac{3x-4}{12} + [\frac{11-x}{3} - \frac{1}{4}] = \frac{x+2}{6}$

300) Solve for x: $\frac{(2+x)(7-x)}{(5-x)(4+x)} = 1$

301) The numerator of a fraction is 2 less than the denominator. If 1is added to its denominator, it becomes $\frac{1}{2}$. Find the fraction.

302) After 24 years I shall be 3 times as old as I was 4 years ago. Find my present age.

303) If the sum of two numbers is 30 and their ratio is 2 : 3, then find the numbers.

304) Solve: 2x - 3 = 7

305) Solve: 2z + 9 = 4

306) Solve: $\frac{x}{3} + \frac{3}{2} = -\frac{5}{2}$

307) Solve: $\frac{15}{4} - 7p = 9$

308) Solve: $x - \frac{3}{7} = \frac{-14}{3}$

309) Solve: $x + \frac{11}{4} = \frac{13}{2}$

310) Solve: $\frac{3x}{4} + 3 = 18$

311) Solve: 6.6x - 3.2 = 10

312) Solve: 8 - 3x = -10

313) Solve: $t + \frac{3}{4} = \frac{27}{4}$

314) A number is such that it is as much greater than 45 as it is less than 75. Find the number.

315) A number is 20 greater than the sum of its one-third and one-ninth. Find the number.

316) Divide 40 into two parts such that $(\frac{1}{4})$ th of one part is equal to $(\frac{3}{8})$ th of the other.

317) The numerator of a fraction is 2 less than its denominator. If 2 is subtracted from the numerator and 1 is added to the denominator then the fraction becomes $\frac{1}{2}$. Find the fraction.

318) After 18 years I shall be 3 times as old as I was 4 years ago. Find my present age.

319) Solve: $\frac{x-3}{6} - 1 = \frac{6x+1}{3}$

320) Solve: $\frac{x-1}{3} - \frac{1}{12} = \frac{4x+1}{4}$

321) Solve: $\frac{x+3}{4} = \frac{2x-3}{5}$

322) Solve: $\frac{x+1}{3} = \frac{x-2}{4} + \frac{1}{3}$

323) Solve: $2(3x - 1) + \frac{7}{2} = 5x - 2(2x - 7)$

324) Solve: 2x - 3 = x + 2

325) Solve: $5x + \frac{7}{2} = \frac{3}{2}x - 14$

326) Solve: 5x - 3 = 3x + 7

327) Solve: $\frac{4}{3}x + \frac{5}{2} = \frac{-3}{2} + x$

328) Solve: $-\frac{15}{4} - 17x = 9 + 10x$

329) Solve: $\frac{x+1}{2x+3} = \frac{3}{8}$

330) Solve: $\frac{x}{x-3} = 2$

331) Solve: $\frac{5}{3x-5} = \frac{1}{8}$

332) Solve: $\frac{x+1}{2x-1} = \frac{1}{3}$

333) Solve: $\frac{7x-5}{3x-5} = 9$

334) Solve: $\frac{x+7}{2x+3} = \frac{8}{5}$

32 x 5 = 160

335) I have a total of Rs. 300 in coins of denomination Rs. 1, Rs.2 and Rs. 5. The number of Rs. 2 coins is 3 times the number of Rs.5 coins. The total number of coins is 160.How many coins of each denomination are with me?

336) The organisers of an essay competition decide that a winner in the competition gets a prize of Rs. 100 and a participant who does not win, gets a prize of Rs. 25. The total prize money distributed is Rs. 3000. Find the number of winners, if the total number of participants is 63.

337) Solve the following linear equations:
m-$\frac{m-1}{2}$ =1-$\frac{m-2}{2}$

338) The digits of a two-digit number differ by 3. If the digits are interchanged, and the resulting number is added to the original number, we get 143. What can be the original number?

339) Arjun is twice as old as Shriya. Five years ago his age was three times Shriya's age. Find their present ages.

340) Divide 34 into two parts in such a way that $\left(\frac{4}{7}\right)$ th of one part is equal to $\left(\frac{2}{5}\right)$ th of the other.

341) My age is four time the difference of my age after four years and three years before. How old am I?

342) Three prizes are to be distributed in a quiz contest. The value of the second prize is five-sixth the value of the first prize and the value of the third prize is four-fifth that of the second prize. If the total value of three prizes is Rs. 150, then find the value of each prize.

343) The length of a rectangle exceeds its breadth by 4 cm. If length and breadth are each increased by 3 cm then area of new rectangle will be 81 cm^2 more than that of the given rectangle. Find the length and breadth of the given rectangle.

344) The difference between the squares of two consecutive numbers is 31. Find the numbers.

345) The numerator of a fraction is 6 less than that the denominator. If 3 is added to the numerator, then fraction is equal to $\frac{2}{3}$ What is the original fraction equal to?

346) Five years ago, a man was seven times as old as his son. Five years after, the father will be three times as old as his son. Find their present ages.

347) A man was engaged as typist for the month of February in 2009. He was paid Rs. 500 per day, but Rs.100 per day were deducted for the days he remained absent. He received Rs. 9200 as salary for the month. For how many days did he work?

348) The volume of water in a tank is twice of that in the other. If we draw out 25 L from the first and add it to the other, the volumes of the water in each tank will be the same.
(a) Find the volume of water in each tank.
(b) Also, check your answer.
(c) What do you understand from a scale?

349) A steamer goes downstream and covers the distance between two ports in 3 h. It covers the same distance in 5 h, when it goes upstream. If the stream flows at 3 km/h, then what is the speed of the steamer upstream?

350) Abdul buys two kinds of cloth material for school uniforms, shirt material which costs him Rs. 50 per metre and trouser material that costs him Rs. 90 per metre. For every 2 m of the trouser material, he buys 3 m of the shirt material. He sells the material at 12% and 20% profit, respectively. His total sale is Rs. 38160. How much trouser material did he buy?

351) Denominator of a number is 4 less than its numerator. If 6 is added to the numerator, it becomes thrice the denominator. Find the fraction.

352) Hamid has three boxes of different fruits. Box A weights $2\frac{1}{2}$ kg more than box B and box C weights $10\ \frac{1}{4}$ kg more than box B. The total weights of the three boxes is $48\frac{3}{4}$ How many kilograms does box A weigh?

353) Kusum buys some chocolates at the rate of Rs.10 per chocolate. She also buys an equal number of candies at the rate of Rs.5 per candy. She makes a 20% profit on chocolates and 8% profit on candies. At the end of the day, all chocolates and candies are sold out and her profit is Rs. 240. Find the number of chocolates purchased.

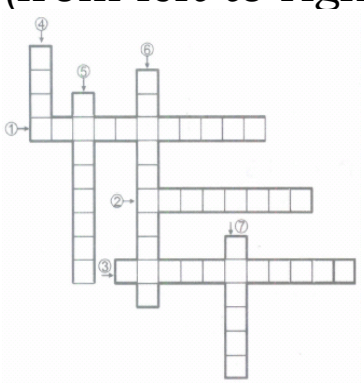
354) In a rare coin collection, there is one gold coin for every three non-gold coins. If 10 more gold coins are added to the collection, the ratio of gold coins to non-gold coins becomes 1 : 2. Based on the information, find the total number of coins in the collection now?

355) Sahil and Suraj are close friends. Sahil's monthly salary is 3 times less than Suraj. Suaj helps Sahil every month with Rs.6000, after which Sahil is left with total money half of the money Suraj has. Then,
(a) find the salary of Sahil and Suraj.
(b) what type of value is depicted by Suraj

356) If cost of five pencils is same as the cost of one notebook. If the cost of 7 pencils and 7 notebooks together is 210. Then, find the cost of 2 pencils and 3 notebooks.

357) The digits of a two digit number differ by 5. If the digits are interchanged and the resulting number is added to the original number, then we get 99. Find the original number.

358) Complete the following crossword puzzle using the given directions for across (from left to right) and down (from top to bottom):



Across:
(1) means taking a term from one side of an equation to the other side with its sign changed.
(2) The value of the variable in an equation which makes LHS and RHS equal is called _____.
(3) In an algebraic term ax, 'a' is called ____ of x.
Down:
(4) The other name of a solution of an equation.
(5) A literal symbol which takes on various numerical values is called a _____
(6) A combination of constants and variables, connected by some or all basic operations is called an algebraic _____.
(7) A polynomial of degree 1 is called a _____ polynomial.

359) Solve: $x - \frac{x}{9} - \frac{x}{12} - \frac{x}{36} = 56$

360) Solve: $\frac{x-3}{x+1} = \frac{1}{2}$

361) Solve: $x + \frac{3x}{2} = 35$

362) Solve: $\frac{3x+10}{5x+10} = \frac{5}{7}$

363) Solve: $x^2 + 10x + 21 = x^2 + 4x + 81$

364) Present ages of Aasha and Rekha are in the ratio 4: 5. Eight years from now, the ratio of their ages will be 5: 6. Find their present ages.

365) The numerator of a rational number is 4 less than its denominator. If I is added to both its numerator and denominator, it becomes $\frac{2}{3}$. Find the rational number.

366) Find the value of 2m + $\frac{1}{2}$ n, , if m and n the 2 sotutions of the equation $\frac{m+3}{7-2m} = \frac{1}{2}$ and $\frac{1}{4}$ (n + 4) = 2n - 3, respectively

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