MATHS

BOOKS - PSEB

Simple Equations

Example

1. Write the following statements in the form of equations:

The sum of three times x and 11 is 32.

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2. Write the following statements in the form of equations:

If you subtract 5 from 6 times a number, you get 7.

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3. Write the following statements in the form of equations:

One fourth of m is 3 more than 7.

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4. Write the following statements in the form of equations:

One third of a number plus 5 is 8.

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5. Convert the followingequations in statement form:

x-5 = 9

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6. Convert the followingequations in statement form:

5p = 20

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7. Convert the followingequations in statement form:

3n+7 = 1

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8. Convert the followingequations in statement form:

$$\frac{m}{5} - 2 = 6$$

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9. Consider the following situation:

Raju's father's age is 5 years more than three

times Raju's age. Raju's father is 44 years old. Set up an equation to find Raju's age.

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10. A shopkeeper sells mangoes in two types of boxes, one small and one large. A large box contains as many as 8 small boxes plus 4 loose mangoes. Set up an equation which gives the number of mangoes in each small box. The number of mangoes in a large box is given to be 100.

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11. Complete the last column of the table.

S. No.	Equation	Value	Say, whether the Equation is Satisfied. (Yes/ No)
(i)	$x+3=0$	$x=3$	
(ii)	$x+3=0$	$x=0$	
(iii)	$x+3=0$	$x=-3$	
(iv)	$x-7=1$	$x=7$	
(v)	$x-7=1$	$x=8$	
(vi)	$5x=25$	$x=0$	
(vii)	$5x=25$	$x=5$	
(viii)	$5x=25$	$x=-5$	
(ix)	$\frac{m}{3}=2$	$m=-6$	
(x)	$\frac{m}{3}=2$	$m=0$	
(xi)	$\frac{m}{3}=2$	$m=6$	

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12. Check whether the value given in the brackets is a solution to the given equation or not

$n + 5 = 19 \ (n = 1)$

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13. Check whether the value given in the brackets is a solution to the given equation or not

$7n + 5 = 19 \ (n = -2)$

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14. Check whether the value given in the brackets is a solution to the given equation or not

$7n + 5 = 19 \ (n = 2)$

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15. Check whether the value given in the brackets is a solution to the given equation or

not

$4p - 3 = 13 \ (p = 1)$

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16. Check whether the value given in the brackets is a solution to the given equation or not

$4p - 3 = 13 \ (p = -4)$

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17. Check whether the value given in the brackets is a solution to the given equation or not

$4p - 3 = 13 \ (p = 0)$

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18. Solve the following equations by trial and error method:

$5p + 2 = 17$

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19. Solve the following equations by trial and error method:

$3m - 14 = 4$

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20. Write equations for the following statements:

The sum of numbers x and 4 is 9.

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21. Write equations for the following statements:

2 subtracted from y is 8.

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22. Write equations for the following statements:

Ten times a is 70.

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23. Write equations for the following statements:

The number b divided by 5 gives 6.

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24. Write equations for the following statements:

Three-fourth of t is 15.

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25. Write equations for the following statements:

Seven times m plus 7 gets you 77.

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26. Write equations for the following statements:

One-fourth of a number x minus 4 gives 4.

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27. Write equations for the following statements:

If you take away 6 from 6 times y, you get 60.

28. Write equations for the following statements:

If you add 3 to one-third of z, you get 30.

29. Write the following equations in statement forms:

$p + 4 = 15$

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30. Write the following equations in statement forms:

$m - 7 = 3$

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31. Write the following equations in statement forms:

2m = 7

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32. Write the following equations in statement forms:

$\frac{m}{5} = 3$

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33. Write the following equations in statement forms:

$3\frac{m}{5} = 6$

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34. Write the following equations in statement forms:

3p + 4 = 25

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35. Write the following equations in statement forms:

$4p - 2 = 18$

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36. Write the following equations in statement forms:

$\frac{p}{2} + 2 = 8$

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37. Set up an equation in the following cases:

Irfan says that he has 7 marbles more than five times the marbles Parmit has. Irfan has 37 marbles. (Take m to be the number of Parmit's marbles.)

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38. Set up an equation in the following cases:

Laxmi's father is 49 years old. He is 4 years older than three times Laxmi's age. (Take Laxmi's age to be y years.)

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39. Set up an equation in the following cases:

The teacher tells the class that the highest marks obtained by a student in her class is twice the lowest marks plus 7. The highest score is 87. (Take the lowest score to be l.)

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40. Set up an equation in the following cases:

In an isosceles triangle, the vertex angle is

twice either base angle. (Let the base angle be b in degrees. Remember that the sum of angles of a triangle is 180 degrees).

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41. Solve:

$3n + 7 = 25$

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42. Solve:

$2p-1 = 23$

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43. Give first the step you will use to separate the variable and then solve the equation:

$x-1 = 0$

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44. Give first the step you will use to separate the variable and then solve the equation:

$x+1 = 0$

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45. Give first the step you will use to separate the variable and then solve the equation:

$x-1 = 5$

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46. Give first the step you will use to separate the variable and then solve the equation:

$x+6 = 2$

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47. Give first the step you will use to separate the variable and then solve the equation:

$y-4 = -7$

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48. Give first the step you will use to separate the variable and then solve the equation:

$y-4 = 4$

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49. Give first the step you will use to separate the variable and then solve the equation:

$y+4 = 4$

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50. Give first the step you will use to separate the variable and then solve the equation:

$y+4 = -4$

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51. Give first the step you will use to separate the variable and then solve the equation:

$3|= 42$

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52. Give first the step you will use to separate the variable and then solve the equation:

$$\frac{b}{2} = 6$$

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53. Give first the step you will use to separate the variable and then solve the equation:

$$\frac{p}{7} = 4$$

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54. Give first the step you will use to separate the variable and then solve the equation:

$4x = 25$

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55. Give first the step you will use to separate the variable and then solve the equation:

$8y = 36$

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56. Give first the step you will use to separate the variable and then solve the equation:

$$\frac{z}{3} = \frac{5}{4}$$

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57. Give first the step you will use to separate the variable and then solve the equation:

$$\frac{a}{5} = \frac{7}{15}$$

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58. Give first the step you will use to separate the variable and then solve the equation:

$20t = -10$

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59. Give the steps you will use to separate the variable and then solve the equation:

$3n-2 = 46$

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60. Give the steps you will use to separate the variable and then solve the equation:

5m+7 = 17

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61. Give the steps you will use to separate the variable and then solve the equation:

$$\frac{20p}{3} = 40$$

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62. Give the steps you will use to separate the variable and then solve the equation:

$3\frac{p}{10} = 6$

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63. Solve the following equations:

10p = 100

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64. Solve the following equations:

10p + 10 = 100

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65. Solve the following equations:

$$\frac{p}{4} = 5$$

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66. Solve the following equations:

$$-\frac{p}{3} = 5$$

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67. Solve the following equations:

$$\frac{3p}{4} = 6$$

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68. Solve the following equations:

$3s = -9$

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69. Solve the following equations:

$3s + 12 = 0$

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70. Solve the following equations:

$3s = 0$

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71. Solve the following equations:

$2q = 6$

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72. Solve the following equations:

$2q - 6 = 0$

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73. Solve the following equations:

$2q + 6 = 0$

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74. Solve the following equations:

$2q + 6 = 12$

Watch Video Solution

75. Solve :

$12p-5 = 25$

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76. Solve

$4(m+3) = 18$

77. Solve

$-2(x+3) = 8$

78. Solve the following equations:

$$2y + \frac{5}{2} = \frac{37}{2}$$

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79. Solve the following equations:

5t + 28 = 10

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80. Solve the following equations:

$$\frac{a}{5} + 3 = 2$$

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81. Solve the following equations:

$$\frac{q}{4} + 7 = 5$$

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82. Solve the following equations:

$$\frac{5}{2}x = -10$$

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83. Solve the following equations:

$$\frac{5}{2}x = \frac{25}{4}$$

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84. Solve the following equations:

$$7m + \frac{19}{2} = 13$$

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85. Solve the following equations:

$6z + 10 = -2$

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86. Solve the following equations:

$$\frac{3l}{2} = \frac{2}{3}$$

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87. Solve the following equations:

$$\frac{2b}{3} - 5 = 3$$

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88. Solve the following equations:

$2(x + 4) = 12$

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89. Solve the following equations:

$3(n - 5) = 21$

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90. Solve the following equations:

$3(n - 5) = -21$

Watch Video Solution

91. Solve the following equations:

$-4(2 + x) = 8$

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92. Solve the following equations:

$4(2 - x) = 8$

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93. Solve the following equations:

$4 = 5(p - 2)$

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94. Solve the following equations:

$-4 = 5(p - 2)$

Watch Video Solution

95. Solve the following equations:

$16 = 4 + 3(t + 2)$

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96. Solve the following equations:

$4 + 5(p - 1) = 34$

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97. Solve the following equations:

$0 = 16 + 4(m - 6)$

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98. Construct 3 equations starting with $x = 2$

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99. Construct 3 equations starting with x = – 2

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100. The sum of three times a number and 11 is 32. Find the number.

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101. Find a number, such that one-fourth of the number is 3 more than 7.

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102. Raju's father's age is 5 years more than three times Raju's age. Find Raju's age, if his father is 44 years old.

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103. Set up equations and solve them to find the unknown numbers in the following cases:

Add 4 to eight times a number, you get 60.

104. Set up equations and solve them to find the unknown numbers in the following cases:

One-fifth of a number minus 4 gives 3.

105. Set up equations and solve them to find the unknown numbers in the following cases:

If I take three-fourths of a number and add 3 to it, I get 21.

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106. Set up equations and solve them to find the unknown numbers in the following cases:

When I subtracted 11 from twice a number, the result was 15.

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107. Set up equations and solve them to find the unknown numbers in the following cases:

Munna subtracts thrice the number of notebooks he has from 50, he finds the result to be 8.

108. Set up equations and solve them to find the unknown numbers in the following cases:

Ibenhal thinks of a number. If she adds 19 to it and divides the sum by 5, she will get 8.

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109. Set up equations and solve them to find the unknown numbers in the following cases:

Anwar thinks of a number. If he takes away 7 from $\frac{5}{2}$ of the number, the result is 23

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110. Solve the following:

The teacher tells the class that the highest marks obtained by a student in her class is twice the lowest marks plus 7. The highest score is 87. What is the lowest score?

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111. Solve the following:

In an isosceles triangle, the base angles are equal. The vertex angle is 40°. What are the

base angles of the triangle? (Remember, the sum of three angles of a triangle is 180°).

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112. Solve the following:

Sachin scored twice as many runs as Rahul. Together, their runs fell two short of a double century. How many runs did each one score?

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113. Solve the following:

Irfan says that he has 7 marbles more than five times the marbles Parmit has. Irfan has 37 marbles. How many marbles does Parmit have?

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114. Set up an equation in the following cases:

Laxmi's father is 49 years old. He is 4 years older than three times Laxmi's age. (Take Laxmi's age to be y years.)

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115. Solve the following:

People of Sundargram planted trees in the village garden. Some of the trees were fruit trees. The number of non-fruit trees were two more than three times the number of fruit trees. What was the number of fruit trees planted if the number of non-fruit trees planted was 77?

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116. Solve the following riddle:

I am a number,

Tell my identity!

Take me seven times over

And add a fifty!

To reach a triple century

You still need forty!

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