7th – Simple Equations I

An equation which has only one variable whose highest power is one is called a linear equation in one variable. The following are some examples of linear equations: 3a = 6, 2x – 5 = 0 etc.

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

(a) Three times a number x is 12.
(b) Sum of a number a and 3 is 9.
(c) Half of a number y is 8.
(d) Sum of 2 times of x and 3 times of y equals 25.
(e) One fourth of m is 3 more than 7.
(f) One third of a number plus 5 is 8
(g) Seven times a number plus 7 gets you 7
(h) If you take away 6 from 6 time a number, you get 60

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

(a) 11 added to 2m to get 40.
(b) 11 subtracted from 2m to 25
(c) 5 times y to which 3 is added to get 45
(d) 5 times y from which 3 is subtracted to get 33
(e) y is multiplied by – 8 to get 24
(f) y is multiplied by – 8 and then 5 is added to the result to get 29.
(g) y is multiplied by 5 and the result is subtracted from 16 to get 4
(h) y is multiplied by – 5 and the result is added to 16 to get 8
(i) A number added to 9 is 15.
(j) The product of 3 and a number is 27.
(k) Square of a number exceeds 27 by 22.

3. Convert the following equations in statement form:

(a) P + 4 = 15 (b) $\frac{3m}{5} = 6$ (c) 3p + 4 = 25 (d) y + 8 = 13

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

(a) X-1 = 0 (b) x=1 = 0 (c) x-1=5 (d) x + 6 = 2 (e) y-4 = -7

5. Solve:

(a) 19x -13 = 11x + 35 (b) 2(x-2)-3(x-3)=5(x-5) (c) 2x-3 = 5 (d) $\frac{1}{3}$ (2x-1) =3

6. One –fourth of a number is 8. Find the numbers
7. Ashok's father is 8 times as old as Ashok. Find his age, if age of his father is 48 years.
8. A number consists of 2 digits. Sum of the digits is 9. If 9 are subtracted from the number, the digits are reversed. Find the number.
9. Form an equation having solution p=$\frac{1}{6}$.
10. $\frac{2}{5}$ Of a number are 16. What is the numbers
11. Supriya asked Neeti to think of a number. Then she asked to double it and add 5 to it. If the bigger number is 78, find the smaller number.
12. One fifth of a number plus 10 gives 20. Find the number.
13. 2/5 of a number is 20, Find the number.
14. Divide 84 into two parts such that 1/3 of one part is equal to ¼ of other part.
15. If 3 is subtracted from 1/3 of a number, the answer is 2. Find the number.
16. A man is 7 times as old as his son. If he is 56 years, find the age of his son

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