Algebra

I) Fill in the blanks :

1. Letters used to represent numbers are called _____
2. The literals whose value vary from problem to problem are called _____
3. Numerals whose value is fixed are called _____
4. The statement of equality which involves literals is called an _____
5. The value of the variable which satisfies the equation is called the _to the equation.

II) Write the expression :

1. m increased by 8.
2. b decreased by 31.
3. Five items x increased by 5 gives 55.
4. Half of p subtracted from the sum of a and b.
5. Product of 7 and x divided by the difference of 7 and x.
6. Sum of p, q and r divided by the product of a and 5.
7. One fourth of the difference of x and y.
8. 4 subtracted from n, gives 36.
9. z minus twice x.
10. m taken away from 50, gives 15.

III) Identify the solution and show that other values do not satisfy

1. X+8=24 (x=3, x=15, x=16, x=0)
2. 4a=32 (a=8, a=4, a=6, a=7)
3. y−9=29(y=20, y=38, y=37, y=39)
4. $\frac{p}{5}$ =16 (p=75, p=85, p=90, p=80)

IV) Solve :

1. X+11 = 30
2. 6a=24
3. m−5=2
4. $\frac{x}{4}$ =2

5. $\frac{x}{7} = 5$

6. $\frac{a}{9} = 4$

7. 10n = 70

8. 16=y+10

9. t−14=0

10. 4x=32

11. 17−p=15

12. 23−y=0

Answers :

I) 1. Variables 2. Variables 3. Constants 4. Equation 5. Solution

II) *1. m+8 2. b−31* *3.5x+5=55* *4.(a+b)−* $\frac{1}{2}p$

5. $\frac{7x}{7-x}$ *6.* $\frac{p+q+r}{5a}$ *7.* $\frac{1}{4}$ *(x-y)* *8. n−4=36*

9.z−2x 10.50−m=15

III) *1. x=16* *2.a=8* *3.y=38* *4.p=80*

IV) *1. x=19* *2.a=4* *3.m=7* *4.x=8*

5.x=35 *6.a=36* *7.n=7* *8.y=6*

9.t=14 *10.x=8* *11.p=2* *12.y=23*