

SAINIK SCHOOL GOPALGANJ
SUB: MATHEMATICS
CLASS – VIII

ASSIGNMENT – 2

LINEAR EQUATION IN ONE VARIABLE

1. What do we get when we transpose $\frac{5}{2}$ to RHS in the equation $\frac{x}{4} + \frac{5}{2} = -\frac{3}{3}$?
 - (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
2. 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) $-3x - x = 4$
3. 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
4. If $7x + 15 = 50$, then which of the following is the solution of the equation?
 - (A) -5
 - (B) $\frac{65}{7}$
 - (C) 5
 - (D) $\frac{1}{5}$
5. If $\frac{2x}{5} = 4$, the value of x is
 - (A) 10
 - (B) -10
 - (C) $-\frac{8}{5}$
 - (D) $\frac{8}{5}$
6. If the sum of two consecutive numbers is 71 and one number is x , then the other number is-
 - (A) $x + (x+1) = 71$
 - (B) $x + (x+2) = 71$
 - (C) $x + x = 71$
 - (D) none of these
7. Two year ago my age was x years, then what was my age 5 years ago?
 - (A) $X + 7$
 - (B) $X - 2 - 5$
 - (C) $X - 5$
 - (D) $X - 3$
8. How old will I be after 10 years, if my age before 10 years was 'x' years?
 - (A) $X + 20$
 - (B) $X - 20$
 - (C) $X + 10$
 - (D) $X - 10$

9. If the difference of two consecutive numbers is 15 and greater of them is x then the smaller number is:

- (A) 16
- (B) 14
- (C) 8
- (D) 7

10. If x is an even number, which is the next odd number?

- (A) $X + 1$
- (B) $X + 2$
- (C) $X - 1$
- (D) $X - 2$

Part – I

1. Solve the following Equations

- a) $(2x - 5)/(3x - 1) = (2x - 1)/(3x + 2)$
- b) $(3 - 7x)/(15 + 2x) = 0$
- c) $(0.4y - 3)/(1.5y + 9) = -7/5$
- d) $2/(3x - 1) + 3/(3x + 1) = 5/3x$
- e) $2/(x - 3) + 1/(x - 1) = 5/(x - 1) - 2/(x - 2)$
- f) $15(x - y) - 3(x - 9) + 5(x + 6) = 0$
- g) $y/2 - 1/2 = y/3 + 1/4$
- h) $(0.5y - 9)/0.25 = 4y - 3$
- i) (t) $[17(2 - y) - 5(y + 12)]/(1 - 7y) = 8$

2. Sunita is as twice as old as Ashima. If six years is subtracted from Ashima's age and 4 years added to Sunitas age, then Sunita will be four times Ashima's age. How old were they two years ago?

3. The sum of two twin prime numbers is 60. Find the prime nos.

4. Of the three angles of a triangle, the second one is one third of the first and the third angles are 26 degrees more than the first angle. Find all the three angles of the triangle.

5. If one number is multiplied by the Number the resulting number is the sum of the square of the first number and cube root of the second number. Find the number of such Pairs.

Part - II

1. Solve $x/3 + 1/5 = x/2 - 1/4$

2. Show that $x = 4$ is a solution of the equation $x + 7 - 8x/3 = 17/6 - 5x/8$.

3. Find x for the equation: $(2 + x)(7 - x)/(5 - x)(4 + x) = 1$
4. A number is such that it is as much greater than 45 as it is less than 75. Find the number.
5. Divide 40 into two parts such that $1/4$ th of one part is $3/8$ th of the other.
6. $x + 3x/2 = 35$. Find x .
7. A is twice old as B. Five years ago A was 3 times as old as B. Find their present ages.
8. Solve: $(x + 3)/6 + 1 = (6x - 1)/3$
9. The digits of a 2-digit number differ by 5. If the digits are interchanged and the resulting number is added to the original number, we get 99. Find the original number.
10. Solve: $5x - 3 = 3x + 7$
11. Find the solution of $3x - 4 = 12$
12. Solve: $5x - 9 = 8$
13. What should be subtracted from thrice the rational number $-8/3$ to get $5/2$?
14. The sum of three consecutive multiples of 7 is 63. Find these multiples.
15. Solve $3x/4 - 7/4 = 5x + 12$
16. Perimeter of a rectangle is 13cm. if its width is $11/4$ cm, find its length.
17. The present of Sita's father is three times the present age of Sita. After six years sum of their ages will be 69 years. Find their present ages.
18. The digits of a two-digit number differ by 3. If digits are interchanged and the resulting number is added to the original number, we get 121. Find the original number.
19. $(x-2)/(x+1) = 1/2$. Find x
20. Sanjay will be 3 times as old as he was 4 years ago after 18 years. Find his present age.
21. If the sum of two numbers is 30 and their ratio is $2/3$ then find the numbers.
22. The numerator of a fraction is 2 less than the denominator. If one is added to its denominator, it becomes $1/2$ find the fraction.
23. Solve the following equations:
 - (a) $5x - 11 = 3x + 9$
 - (b) $3y + 4 = 7 - 2y$

$$(c) 9 - 2(x - 5) = x + 10$$

$$(d) 5(y - 1) = 3(2y - 5) - (1 - 3y)$$

$$(e) 2(x - 1) - 6x = 10 - 2(x - 4)$$

$$(f) x/3 - (x - 2)/2 = 7/3$$

$$(g) (x - 3)/4 + (x - 1)/5 - (x - 2)/3 = 1$$

$$(h) (3y - 2)/3 + (2y + 3)/3 = (y + 7)/6$$

$$(i) (8x - 5)/(7x + 1) = -4/5$$

$$(j) (5 - 7x)/(2 + 4x) = -8/7$$

$$(k) (x - 2)/(x - 3) = (x - 1)/(x + 1)$$
