

Atomic Energy Education Society

Session : 2023 – 24

Class: VIII

Subject: Mathematics

WORKSHEET NO.- 1

Name of the Chapter : LINEAR EQUATION IN ONE VARIABLE

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1. This work sheet is divided into **five** sections-**A, B, C,D and E**.
 2. **Section A**-Question No, **1 to 10** are multiple choice questions. Each question carries **1** mark.
 3. **Section B** -Question No. **11 to 20** are Very Short answer type questions. Each question carries **1** marks.
 4. **Section C**- Question No. **21 to 30**. Each question carries **2** marks.
 5. **Section D** -Question No. **31 to 35**. Each question carries **3** marks.
 6. **Section E**- Question No. **36 to 40** carry **5** marks.

SECTION – A

(1 x 10 = 10 Marks)

Choose the correct option

1.What do we get when we transpose $\frac{5}{2}$ to RHS in the equation: $\frac{x}{4} + \frac{5}{2} = -\frac{3}{4}$?

- (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) $\frac{1}{5} 5$.

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 $3x - 4(64 - x) = 10$, then the value of x is _____.

- (a) -266 (b) 133 (c) 66.5 (d) 38

7.. Which of the following is not a linear equation in one variable?

- (a) $33z+5 = 0$ (b) $33(x+y) = 0$ (c) $33x+5 = 0$ (d) $33y+5 = 0$

8. The solution of $2x-3=7$ is:

- (a) 5 (b) 7 (c) 12 (d) 11

9. The solution of $2y + 9 = 4$ is:

- (a) $9/2$ (b) $4/9$ (c) $-2/5$ (d) $-5/2$

10. The solution of $3x = 2x + 18$ is:

- (a) $5/18$ (b) 18 (c) $18/5$ (d) 1

SECTION – B

(1 x 10 = 20 M)

11. If $m - 5 = 2$, then the value of m is ---

12. If $8x - 3 = 25 + 17x$, then x is ____.

13. The value of x for which the expressions $3x - 4$ and $2x + 1$ become equal is ____.

14. If $5t - 7 = 3t - 5$ then $t = ?$

15. The value of x in $\frac{2}{3}x + 7 = x$ is ____.

16. If $5x - 4(64 - x) = 9$, then the value of x is ____.

17. If $\frac{5x}{3} - 4 = \frac{2x}{5}$, then the numerical value of $2x - 7$ is ____.

18. If $3x = 4x + 18$, then the value of x is ____.

19. Solve the equation and find the value of n .

$$9n - 7 = 3n + 5$$

20. If $\frac{n}{11} = 10$, then $n = \frac{11}{10}$. Write True / False.

SECTION – C

(2 x 10 = 20 M)

Solve the following equations

21) $5x - 11 = 3x + 9$

22) $3y + 4 = 7 - 2y$

23) $8x = 4x + 18$

24) $5t - 3 = 3t - 5$

25) $2y + 9 = -7$

26) $2x - 13 = 17$

27) $12x - 9 = -4$

28) $21y - 8 = 7$

29) $8x + 4 = 3(x - 1) + 7$

30) $9 - 2(x - 5) = x + 10$

SECTION – D**(3 x 5 = 15 M)**

31. Solve: $\frac{2x+3}{5} + 1 = \frac{x+3}{3}$

32. Solve: $\frac{2x}{5} - \frac{x}{3} = \frac{x}{4} + \frac{3}{2}$

33. Solve for x : $\frac{-7}{15}x + \frac{22}{15}x = -2x + 15$

34. If $3/_{n+5} = 4/_{3-n}$, find the value of n.

35. Solve the equation $2^{n-3}/_{n+1} = -2^{1/3}$

SECTION – E**(5 x 5 = 25 M)**

Solve the following equations (from 36 to 40) and check your results.

36) $\frac{7m+4}{m+2} = \frac{-4}{3}$

37) $0.12(4x - 3) = 0.3x + 8$

38) (a) $\frac{4x+7}{9-3x} = \frac{-1}{4}$

(b) $3(t-3) = 5(2t+1) + 7$

39) $\frac{4x+7}{3} + \frac{2x}{5} = \frac{-1}{4}$

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