# THE WISDOM ACADEMY

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| Class:9th | Test#07:Math | TotalMarks:40 | Chap#5+1 |
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**Student Name:** _____ **Roll No:** _____

## Q: 01 Encircle the correct option: (1x10)

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|---|---|---|---|---|---|
| 1 | The solution of the equation $3x - 7 = 2$ is: | a) $x = \frac{5}{3}$ | b) $x = 9$ | c) $x = 3$ | d) $x = \frac{7}{3}$ |
| 2 | A linear equation in one variable has only _____ solution. | a) *one* | b) Two | c) Three | d) Four |
| 3 | The highest power of variable is always 1 in which equation: | a) Linear | b) Quadratic | c) Polynomial | d) Non of these |
| 4 | Linear equation is of the form: | a) $ax + b = 0, a \neq 0$ | b) ax + b 0 a = 0 | c) $ax^2 + bx = 0, a \neq 0$ | d) ax + b=0, a ≠ 0 |
| 5 | x = 5 is the solution of inequality: | a) 2x + 3 < 0 | b) x + 4 < 0 | c) x + 2 < 0 | d) 2x – 3 > 0 |
| 6 | The value of x if $\frac{2}{3}x - 1 < 0$ | a) $x < \frac{2}{3}$ | b) $x < \frac{3}{2}$ | c) $x < \frac{5}{2}$ | d) $x < \frac{4}{5}$ |
| 7 | The graphs of x + 2y < 6 and x + 2y = 6 are: | a) closed half planes | b) Open half planes | c) closed full planes | d) open full planes |
| 8 | The y-intercept of 2x + y = 8 is: | a) (8, 0) | b) (8, 2) | c) (2,8) | d) (0, 8) |
| 9 | For feasible region: | a) x > 0, y > 0 | b) x ≤ 0, y ≥ 0 | c) x ≤ 0, y ≤ 0 | d) x ≥ 0, y ≤ 0 |
| 10 | (0,0) is solution of inequality: | a) 4x + 5y > 8 | b) 3x + y > 6 | c) –2x + 3y < 0 | d) x + y > 4 |

## Q: 02 Write the Answers of these Short Questions:(2x10)

1) Solve: $\frac{x-2}{5} - \frac{x-4}{2} = 2$
2) What do you know about linear equation?
3) Solve: 3x-5=7
4) Find the Solution of x if $\frac{x}{3} + 6 - 1 = -12$ and also represent it on the real line?
5) Solve the linear inequalities on the xy-plane: $2x \geq -3$
6) Solve the inequality and represent on the real line: $\frac{5}{3}x - \frac{3}{4} < \frac{-1}{12}$
7) Shade the region for the following inequalities in xy-plane: $3x + 7y \geq 21$
8) Indicate the solution region of the inequalities by shading: $3x+7y \geq 21$ $y \leq 4$
9) Define test point.
10) If $x = 4 - \sqrt{17}$ then find $\frac{1}{x}$?

## Q: 03 Solve these Long Questions:

**A.** Simplify: $\frac{5.(25)^{n+1} - 25.(5)^{2n}}{5.(5)^{2n+3} - (25)^{n+1}}$

**B.** Simplify: $\frac{54 \times \sqrt[3]{(27)^{2x}}}{9^{x+1} + 216(3^{2x-1})}$