

Unit 5: Linear Inequalities & Linear Programming

1. Optimize means _____ a quantity under certain constraints:
 - a) minimize
 - b) maximize
 - c) maximize or minimize
 - d) none of the above
2. Which of them is associated equations?
 - a) $ax - by = c$
 - b) $ax + by = c$
 - c) $ax + by = -c$
 - d) none of the above
3. There are _____ feasible solutions in the feasible region.
 - a) infinite
 - b) finite
 - c) defined
 - d) none of above
5. Inequalities have _____ symbols.
 - a) 2
 - b) 3
 - c) 4
 - d) 1
6. The graph of linear equation $2x + 3y = 10$
 - a) // line
 - b) curve
 - c) zig zag
 - d) straight line
7. Non negative constraints are called _____ variables.
 - a) non - decision
 - b) decision
 - c) constant
 - d) none of the above
8. The solution set of $x < 4$ is _____
 - a) $-\infty < x < 4$
 - b) $-\infty > x > 4$
 - c) $-\infty < x < 2$
 - d) $-\infty > x < 2$
9. Corner point is also called _____
 - a) code
 - b) curve
 - c) vertex
 - d) none of the above
10. The solution set of $x > 10$ is _____
 - a) $10 > x > \infty$
 - b) $10 < x < -\infty$
 - c) $10 > x > -\infty$
 - d) $10 < x < \infty$
11. $3x + 4 > 0$ is
 - a) equation
 - b) identity
 - c) inequality
 - d) none of these
12. $3x + 4 \geq 0$ is
 - a) equation
 - b) inequality
 - c) identity
 - d) none of these
13. $3x + 4 < 0$ is
 - a) inequality
 - b) equation
 - c) not inequality
 - d) identity

14. $3x + 4 \leq 0$ is
- not inequality
 - equation
 - identity
 - inequality
15. $3x + 4 = 0$ is
- not inequality
 - equation
 - identity
 - inequality
16. An expression involving any of the symbols $<$, $>$, \leq or \geq is called
- equation
 - inequality
 - linear equation
 - identity
17. $2x + 3x > 4$ is linear inequality in
- one variable
 - two variables
 - three variables
 - none of these
18. $ax + by < c$ is linear inequality in
- four variables
 - three variables
 - two variables
 - one variable
19. The real numbers which satisfy an inequality form its
- solution
 - coefficient
 - domain
 - range
20. $x = 0$ is in the solution of the inequality
- $x > 0$
 - $3x + 4 < 0$
 - $2x - 3 < 0$
 - $x - 2 < 0$
21. $x = 0$ is in the solution of the inequality
- $x + 1 < 0$
 - $2x + 3 < 0$
 - $2x - 3 < 0$
 - $3 + x < 0$
22. $x = 1$ is in the solution of the inequality
- $x + 1 < 0$
 - $2x - 4 < 0$
 - $2x - 4 > 0$
 - $x + 3 < 0$
23. $x = 1$ is in the solution of the inequality
- $x + 1 > 0$
 - $x - 2 > 0$
 - $3x - 1 < 0$
 - $x + 2 < 0$
24. $x = -1$ is in the solution of inequality
- $x + 5 < 0$
 - $2x + 3 \leq 0$
 - $x > 0$
 - $2x + 3 > 0$
25. $x = \underline{\hspace{1cm}}$ is in the solution of $2x + 3 < 0$
- 0
 - 1
 - 1
 - 2
26. $x = \underline{\hspace{1cm}}$ is in the solution of $2x + 3 \geq 0$
- 1
 - 2
 - 3
 - 4
27. $x = \underline{\hspace{1cm}}$ is in the solution of $2x - 3 < 0$
- 2
 - 2
 - 3
 - 4
28. $x = \underline{\hspace{1cm}}$ is in the solution of $2x - 5 > 0$
- 0
 - 2
 - 2
 - 3

29. The points (x, y) which satisfy a linear inequality in two variables x and y form its
- domain
 - range
 - solution
 - none of these
30. The solution set of the inequality $ax + by < c$ is
- straight line
 - half plane
 - parabola
 - none of these
31. $(0, 0)$ is in the solution of the inequality
- $3x + 4y > 3$
 - $x - 2y < 2$
 - $x + 2y > 2$
 - $2x - 3y > 5$
32. $(1, 1)$ is in the solution of the inequality
- $3x + 4y > 3$
 - $2x + 3y < 2$
 - $4x - 3y > 5$
 - $2x - 3y > 2$
33. $(1, 0)$ is in the solution of inequality
- $3x + 2y > 8$
 - $2x - 3y < 4$
 - $2x + 3y > 3$
 - $x - 2y < -5$
34. $(0, 1)$ is in the solution of the inequality
- $3x + 2y > 8$
 - $2x - 3y < 4$
 - $2x + 3y > 5$
 - $x - 2y < -5$
35. $(0, 1)$ is in the solution of inequality
- $x - 2y > 0$
 - $x - y < 2$
 - $3x + 2y > 5$
 - $3x - 2y < 2$
36. $(0, 0)$ is in the solution of the inequality.
- $x + y > 3$
 - $x - y > 2$
 - $3x + 2y > 5$
 - $3x - 2y < 2$
37. $(1, 2)$ is in the solution of the inequality
- $2x + y > 8$
 - $2x + y \leq 6$
 - $2x - y > 1$
 - $2x + 3y < 2$
38. The point _____ is in the solution of the inequality $2x - 3y < 5$
- $(1, 1)$
 - $(2, 2)$
 - $(0, 1)$
 - $(0, 2)$
39. The point _____ is in the solution of the inequality $2x - 3y > 5$
- $(1, -1)$
 - $(2, 2)$
 - $(2, -2)$
 - $(3, 3)$
40. The point _____ is in the solution of the inequality $4x - 3y < 2$
- $(0, 1)$
 - $(2, 1)$
 - $(0, 0)$
 - $(3, 0)$

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