



MC200200170: NAFEE AHMAD

Time Left 89 sec(s)

MTH601:Quiz

Quiz Start Time: 10:05 PM, 24 July 2021

Question # 10 of 10 (Start time: 10:13:52 PM, 24 July 2021)

Total Marks: 1

The insensitivity of the solution relative to the original decision variables in an LP problem which is solved by M-method is overcome by -----.

Select the correct option

- |                                  |                   |
|----------------------------------|-------------------|
| <input type="radio"/>            | Simplex method    |
| <input checked="" type="radio"/> | Two phase method  |
| <input type="radio"/>            | Duality principle |
| <input type="radio"/>            | Graphical method  |

Click to Save Answer &amp; Move to Next Question

# M@I!k





MC200200058: SHAH KHALID

Time Left 87 sec(e)

MTH601:Quiz

Quiz Start Time: 04:59 PM, 24 July 2021

Question # 7 of 10 ( Start time: 05:05:00 PM, 24 July 2021 )

Total Marks: 1

A linear programming problem \_\_\_\_\_ optimal solutions.

Select the correct option



must have the multiple



may not have the multiple



must not have the multiple



may have the multiple

Vaidhika is a 2021-22 VU Student





MC200200058: SHAH KHALID

Time Left 88 sec(s)

MTH601:Quiz

Quiz Start Time: 04:59 PM, 24 July 2021

Question # 2 of 10 ( Start time: 05:00:18 PM, 24 July 2021 )

Total Marks: 1

A Linear Programming problem may not have any feasible solution.

Select the correct option



False



True



Click to Save Answer & Move to Next question





After converting constraints into the respective Standard equalities, we have an LP problem of '4' equations in '6' variables, if the initial basic feasible solution is say; (2,4,0,2), then it is ——— solution.

Select the correct option

- ☐ degenerate infeasible
- ☐ non-degenerate infeasible
- ☐ non-degenerate feasible
- ☐ degenerate feasible

 Not sure



MC190403550: HAFIZ MUHAMMAD HIRAN

Time Left 88 sec(s)

MTH601:Quiz

Quiz Start Time: 05:11 PM, 24 July 2021

Question # 5 of 10 ( Start time: 05:17:25 PM, 24 July 2021 )

Total Marks: 1

After converting constraints into the respective Standard equalities, we have an LP problem of '4' equations in '6' variables. If the initial basic feasible solution is say;  $(2,4,1,2)$ , then its corresponding non-basic solution is-----.

Select the correct option.

- |                                  |         |
|----------------------------------|---------|
| <input type="radio"/>            | (1,2)   |
| <input checked="" type="radio"/> | (2,2)   |
| <input type="radio"/>            | (-4,-2) |
| <input type="radio"/>            | (0,0)   |

Question Navigator: 1 2 3 4 5 6 7 8 9 10

Question # 2 of 10 ( Start time: 06:21:12 PM, 24 July 2021 )

Which of the following difficulty may found while attempting an LP problem by M-method?

Select the correct option

- |                                  |                                             |
|----------------------------------|---------------------------------------------|
| <input checked="" type="radio"/> | Computational error due to large value of M |
| <input type="radio"/>            | Degeneracy is inevitable                    |
| <input type="radio"/>            | Artificial do not leave the basis           |
| <input type="radio"/>            | It often leads to infeasible solution       |



Type here to search



Question # 8 of 10 ( Start time: 06:44:20 PM, 24 July 2021 )

If any or all of the artificial variables do not leave the basis in the final solution, then this indicates that the problem \_\_\_\_\_

▶ Select the correct option

- |                                  |                          |
|----------------------------------|--------------------------|
| <input type="radio"/>            | must have a solution     |
| <input type="radio"/>            | non of these             |
| <input type="radio"/>            | may have a solution      |
| <input checked="" type="radio"/> | does not have a solution |



Type here to search





After converting constraints into the respective Standard equalities, we have an LP problem of '4' equations in '6' variables, if the initial basic feasible solution is say; (2,4,0,2), then it is ——— solution.

Select the correct option

- |                                  |                           |
|----------------------------------|---------------------------|
| <input type="radio"/>            | degenerate infeasible     |
| <input type="radio"/>            | non-degenerate infeasible |
| <input checked="" type="radio"/> | non-degenerate feasible   |
| <input type="radio"/>            | degenerate feasible       |

Question # 7 of 10 ( Start time: 06:26:50 PM, 24 July 2021 )

An optimal solution of a Linear Programming problem is necessarily a Basic feasible solution.

Select the correct option

|                                  |        |
|----------------------------------|--------|
| <input checked="" type="radio"/> | True ✓ |
| <input type="radio"/>            | False  |



Type here to search



Question # 5 of 10 ( Start time: 06:24:27 PM, 24 July 2021 )

Which of the following is true about the inclusion of non-negative slack variable into a constraint of type 'less than or equal'?

Select the correct option

- |                                  |                                                                  |
|----------------------------------|------------------------------------------------------------------|
| <input type="radio"/>            | Inequality become redundant and hence skips from the LP problem. |
| <input checked="" type="radio"/> | Inequality is transformed into strict equality constraint        |
| <input type="radio"/>            | Inequality is transformed into type: 'greater than or equal'     |
| <input type="radio"/>            | This inclusion doest not affect the inequality                   |



## MTH601: Quiz

Question # 4 of 10 ( Start time: 06:23:25 PM, 24 July 2021 )

In the initial iteration of Big M-method, the artificial variables appear in \_\_\_\_\_.

Select the correct option

- |                                  |                          |
|----------------------------------|--------------------------|
| <input type="radio"/>            | Non-basic variables' set |
| <input checked="" type="radio"/> | Basis                    |



Type here to search



Question # 3 of 10 ( Start time: 06:22:05 PM, 24 July 2021 )

In two phase method, for the phase-I, if the objective function has zero value with all vanishing artificial variables then we -----.

Select the correct option

- |                                  |                                   |
|----------------------------------|-----------------------------------|
| <input checked="" type="radio"/> | proceed for 2nd phase             |
| <input type="radio"/>            | necessarily have optimal solution |
| <input type="radio"/>            | cant proceed for 2nd phase        |
| <input type="radio"/>            | Infeasible solution               |



Type here to search



15

IC190403497: AHMAD HAWAZ

ETH601:Quiz

Quiz

Question # 9 of 10 ( Start time: 06:15:45 PM, 24 July 2021 )

In M-method, if the given LP problem has the feasible solution then the optimization algorithm enforces artificial variable to

Select the correct option

- |                                  |                  |
|----------------------------------|------------------|
| <input type="radio"/>            | + Infinity       |
| <input checked="" type="radio"/> | Zero             |
| <input type="radio"/>            | Optimal solution |
| <input type="radio"/>            | - Infinity       |

Question # 8 of 10 ( Start time: 06:14:58 PM, 24 July 2021 )

In two phase method, for the phase-I, a new objective function is expressed as —.

Select the correct option

- |                       |                                    |
|-----------------------|------------------------------------|
| <input type="radio"/> | sum of slack variables             |
| <input type="radio"/> | sum of artificial variables        |
| <input type="radio"/> | difference of artificial variables |
| <input type="radio"/> | difference of slack variables      |
- 

## MTH501:Quiz

Question # 6 of 10 (Start time: 06:13:17 PM, 24 July 2021)

For  $Z = 4x_1 + x_2$  subject to  $3x_1 + 4x_2 \geq 20$ ,  $x_1 + 5x_2 \geq 15$ , we have \_\_\_\_\_ variables.

Select the correct option

- |                                  |                 |
|----------------------------------|-----------------|
| <input type="radio"/>            | three objective |
| <input checked="" type="radio"/> | two artificial  |
| <input type="radio"/>            | both a and b    |
| <input type="radio"/>            | two slack       |

5:11

10150403497: AHMAD HAWAZ

ATH601:Quiz

Quiz Start Time: 05:11

Question # 4 of 10 ( Start time: 06:11:38 PM, 24 July 2021 )

When we have  $\geq$  type constraints, then we convert it to equality constraints by introducing \_\_\_\_\_ variable(s) and solve it by \_\_\_\_\_ method.

Select the correct option

- ☐ artificial, Big M
- ☐ slack, Big M
- ☐ artificial, Two phase
- ☐ artificial and slack, Big M or Two phase



Question # 3 of 10 ( Start time: 06:10:54 PM, 24 July 2021 )

Which of the following is true about an LP problem which is solved by M-method and having infeasible solution?

Select the correct option

- |                       |                                                                                   |
|-----------------------|-----------------------------------------------------------------------------------|
| <input type="radio"/> | Penalty 'M' may not able to force artificial variable to zero in final iteration. |
| <input type="radio"/> | Final iteration table include one of the artificial variables.                    |
| <input type="radio"/> | All choices are equivalent.                                                       |
| <input type="radio"/> | Associated constraints are not consistent                                         |



4G 57%



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2

MC200200058: SHAH KHALID

MTH601:Quiz

Quiz Start Time: 04:5

Question # 2 of 10 ( Start time: 05:00:18 PM, 24 July 2021 )

A Linear Programming problem may not have any feasible solution.

Select the correct option



False



True

Click to Give Answer & Move to Next

40





4G 56% 5:07



quiz.vu.edu.pk/QuizQuestion.as

2



MC200200058: SHAH KHALID

Time Left 8 min

MTH601:Quiz

Quiz Start Time: 04:59 PM, 24 Ju

Question # 7 of 10 ( Start time: 05:05:00 PM, 24 July 2021 )

Total 1

A linear programming problem \_\_\_\_\_ optimal solutions.

Select the correct option



must have the multiple



may not have the multiple



must not have the multiple



may have the multiple

Multiple choice questions are allowed from Windows

41



In Simplex standard table to solve an LP problem of Minimization, we choose the candidate for entering variable in-----.

Minimization k liyee  
most positive

Maximization k liyee  
most negative

Select the correct option

- |                       |                                                   |
|-----------------------|---------------------------------------------------|
| <input type="radio"/> | Constraint with most positive coefficient         |
| <input type="radio"/> | Objective function with most positive coefficient |
| <input type="radio"/> | Constraint with most negative coefficient         |
| <input type="radio"/> | Objective function with most negative coefficient |





MC200200170: NAFEE AHMAD

Time Left 88 sec(s)

MTH601:Quiz

Quiz Start Time: 10:05 PM, 24 July 2021

Question # 1 of 10 ( Start time: 10:05:52 PM, 24 July 2021 )

Total Marks: 1

In two phase method, for the phase-I, the problem has infeasible solution if the minimum value of objective function -----.

Select the correct option



is imaginary



less than zero



equal to zero



greater than zero



Click to Save Answer or Move to Next Question



In the Simplex method to solve an LP problem of minimization, if at the end of iteration, every entry of objective function row is negative then the given problem -----.

Select the correct option

- ☐ can not be optimized
- ☒ has been minimized 
- ☐ needs further improvement
- ☐ has no solution



MC200200170: NAFEEES AHMAD

Time Left 89 sec(s)

MTH601:Quiz

Quiz Start Time: 10:05 PM, 24 July 2021

Question # 2 of 10 ( Start time: 10:06:48 PM, 24 July 2021 )

Total Marks: 1

If in a LP problem, the objective is to maximize:  $z = 2x + 3y$ , with all associated constraints of ' $\leq$ ' type, then in the 1st iteration,  $z = \text{-----}$ .

Select the correct option

|                                  |   |
|----------------------------------|---|
| <input type="radio"/>            | 1 |
| <input type="radio"/>            | 6 |
| <input checked="" type="radio"/> | 0 |
| <input type="radio"/>            | 5 |

Click to Save Answer or Move to Next Question



In two phase method, for the phase-I, a new objective function is expressed as -----.

Select the correct option

- ☒ sum of artificial variables
- ☐ difference of slack variables
- ☐ difference of artificial variables
- ☐ sum of slack variables



MC200200170: NAFEEES AHMAD

Time Left 89 sec(s)

MTH601:Quiz

Quiz Start Time: 10:05 PM, 24 July 2021

Question # 3 of 10 ( Start time: 10:07:27 PM, 24 July 2021 )

Total Marks: 1

To remove artificial variable(s) from the objective function, we have \_\_\_\_\_ method(s).

Select the correct option

|                                  |              |
|----------------------------------|--------------|
| <input type="radio"/>            | Big M        |
| <input type="radio"/>            | simplex      |
| <input checked="" type="radio"/> | both b and c |
| <input type="radio"/>            | Two Phase    |

Click to Save Answer &amp; Move to Next Question

There are two  
methods.

1; Big M technique  
2; Two phase method



In the final iteration of M-method to obtain the optimal solution, the artificial variable must----- the basis.

Select the correct option

☐

add in each variable of

☐

subtract from each variable of

☒

leave

☐

include in



MC200200170: NAFEEES AHMAD

Time Left 89 sec(s)

MTH601:Quiz

Quiz Start Time: 10:05 PM, 24 July 2021

Question # 6 of 10 ( Start time: 10:10:14 PM, 24 July 2021 )

Total Marks: 1

By Simplex method, to minimize ' $Z = 2x + 9y$ ' of an LP problem, if ' $z = A > 0$ ' for the initial iteration then for its next improved solution ( $0 < A < 100$ ), which of the following would be the next entering variable?

Select the correct option

- ☐  $y > 0$
- ☐  $x > 0$
- ☐  $x < 0$
- ☐  $y < 0$

Click to Save Answer or Move to Next Question





MC200200170: NAFEEES AHMAD

Time Left 89 sec(s)

MTH601:Quiz

Quiz Start Time: 10:05 PM, 24 July 2021

Question # 8 of 10 ( Start time: 10:11:46 PM, 24 July 2021 )

Total Marks: 1

While solving an LP problem by the Simplex method, in the standard table, the element at the intersection of key column and key row is called ----- element.

Select the correct option

|                       |          |
|-----------------------|----------|
| <input type="radio"/> | Pivot    |
| <input type="radio"/> | Leaving  |
| <input type="radio"/> | Entering |
| <input type="radio"/> | Slack    |

Click to Save Answer &amp; Move to Next Question



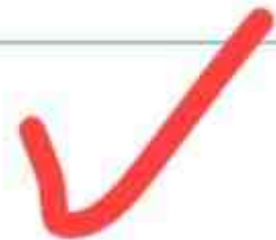
When constraints are of greater than or equal to type, then we

\_\_\_\_\_.

Select the correct option

☐

subtract slack variable and add artificial variable

☐

both of these

☐

add slack variable and subtract artificial variable

☐

non of these



MC200200170: NAFEEES AHMAD

Time Left 89 sec(s)

MTH601:Quiz

Quiz Start Time: 10:05 PM, 24 July 2021

Question # 7 of 10 ( Start time: 10:11:03 PM, 24 July 2021 )

Total Marks: 1

After converting constraints into the respective Standard equalities, we have an LP problem of '4' equations in '6' variables. If the initial basic feasible solution is say, (2,4,1,2), then its corresponding non-basic solution is-----.

Select the correct option

|                       |         |
|-----------------------|---------|
| <input type="radio"/> | (0,0)   |
| <input type="radio"/> | (-4,-2) |
| <input type="radio"/> | (2,2)   |
| <input type="radio"/> | (1,2)   |



Not sure

Click to Save Answer or Move to Next Question



Which of the following difficulty may found while attempting an LP problem by M-method?

Select the correct option

☐

Artificial do not leave the basis

☒

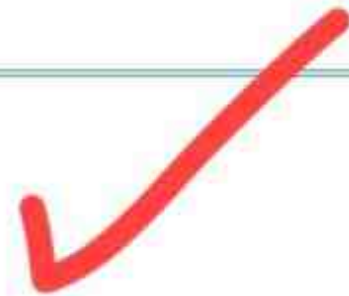
Computational error due to large value of M

☐

It often leads to infeasible solution

☐

Degeneracy is inevitable





MC200200170: NAFEEES AHMAD

Time Left 89 sec(s)

MTH601:Quiz

Quiz Start Time: 10:05 PM, 24 July 2021

Question # 5 of 10 ( Start time: 10:09:12 PM, 24 July 2021 )

Total Marks: 1

In an LP problem, to evaluate the basic variables in Simplex method in any iteration, we would have to express Objective function in terms of ----- variables.

Select the correct option

|                                  |            |
|----------------------------------|------------|
| <input type="radio"/>            | Basic      |
| <input checked="" type="radio"/> | Artificial |
| <input type="radio"/>            | Non-basic  |
| <input type="radio"/>            | Slack      |

Click to Save Answer or Move to Next Question



By Simplex method, to maximize ' $Z = 2x + 9y$ ' of an LP problem, if ' $z=0$ ' for the initial iteration then for its next improved solution, which of the following would be the next entering variable?

Select the correct option

☐

$y > 0$

☐

$x < 0$

☐

$x > 0$

☐

$y < 0$



MC200200170: NAFEE AHMAD

Time Left 89 sec(s)

MTH601:Quiz

Quiz Start Time: 10:05 PM, 24 July 2021

Question # 10 of 10 ( Start time: 10:13:52 PM, 24 July 2021 )

Total Marks: 1

The insensitivity of the solution relative to the original decision variables in an LP problem which is solved by M-method is overcome by -----.

Select the correct option

- |                       |                   |
|-----------------------|-------------------|
| <input type="radio"/> | Simplex method    |
| <input type="radio"/> | Two phase method  |
| <input type="radio"/> | Duality principle |
| <input type="radio"/> | Graphical method  |



Click to Save Answer &amp; Move to Next Question





5:16

4G 11.1 K/s 62



Quiz  
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10

MC190403560: HAFIZ MUHAMMAD IRFAN

Time Left 05:00:00

MT1601:Quiz

Quiz Start Time: 05:11 PM, 24 July 2021

Question # 4 of 10 ( Start Time: 05:16:28 PM, 24 July 2021 )

Total Marks: 1

While solving an LP problem by Simplex method, the inclusion of slacks in the constraints' inequalities helps in finding \_\_\_\_\_ variables.

Select the correct option



non-basic



decision



basic



artificial





3



4G 57% 5:04 PM



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2



MTH501 Quiz

MTH501 Quiz

Quiz Start Time: 04:34 PM, 24 July 2021

Question: 7.5 of 10 (Start time: 05:02:46 PM, 24 July 2021)

Total Marks: 1

While solving a Linear Programming problem by Simplex Method, an inequality says: ' $2x-3y < 5$ ' is transformed into strict equality of the form——, where ' $s \geq 0$ '.

Select the correct option



$$2x-3y +s =5$$



$$2x-3y -s +A =5$$



$$2x-3y +s + A=5$$



$$2x-3y -s =5$$



6:17

MC190403497: AHMAD NAWAZ

MTH601:Quiz

00

Question # 10 of 10 ( Start time: 06:17:09 PM, 24 July 2021 )

If an artificial variable is not included while converting a constraint of type  $\geq$  into equation, then we will have — solution.

Select the correct option

- |                       |                |
|-----------------------|----------------|
| <input type="radio"/> | degenerate     |
| <input type="radio"/> | non-degenerate |
| <input type="radio"/> | feasible       |
| <input type="radio"/> | infeasible     |



MC200200058: SHAH KHALID

Time Left 88 sec(s)

MTH601:Quiz

Quiz Start Time: 04:59 PM, 24 July 2021

Question # 1 of 10 ( Start time: 04:59:12 PM, 24 July 2021 )

Total Marks: 1

For  $Z = 4x_1 + x_2$  subject to  $3x_1 + 4x_2 \geq 20$ ,  $x_1 + 5x_2 \geq 15$ , we have \_\_\_\_\_ variables.

Select the correct option

Reload Math Equations

- |                                  |                 |
|----------------------------------|-----------------|
| <input checked="" type="radio"/> | two slack       |
| <input type="radio"/>            | three objective |
| <input type="radio"/>            | one artificial  |
| <input type="radio"/>            | six             |

Click to Save Answer or Move to Next Question

M@I!k



MC200200058: SHAH KHALID

Time Left 88 sec(s)

MTH601:Quiz

Quiz Start Time: 04:59 PM, 24 July 2021

Question # 4 of 10 ( Start time: 05:01:57 PM, 24 July 2021 )

Total Marks: 1

In two phase method, for the phase-I, a new objective function is expressed as ----.

Select the correct option



sum of artificial variables



difference of artificial variables



difference of slack variables



sum of slack variables

VU Question Bank



MC200200058: SHAH KHALID

Time Left 87 sec(e)

MTH601:Quiz

Quiz Start Time: 04:59 PM, 24 July 2021

Question # 5 of 10 ( Start time: 05:02:49 PM, 24 July 2021 )

Total Marks: 1

While solving a Linear Programming problem by Simplex Method, an inequality says: ' $2x-3y < 5$ ' is transformed into strict equality of the form-----, where ' $s \geq 0$ '.

Select the correct option



$$2x-3y +s =5$$



$$2x-3y -s +A =5$$



$$2x-3y +s + A=5$$



$$2x-3y -s =5$$

XEROX COPY OF THE ORIGINAL QUESTION





MC200200058: SHAH KHALID

Time Left 87 sec(s)

MTH601:Quiz

Quiz Start Time: 04:59 PM, 24 July 2021

Question # 10 of 10 ( Start time: 05:08:00 PM, 24 July 2021 )

Total Marks: 1

In Simplex Standard table to solve an LP problem, if the ratio by taking the RHS of each row and dividing by the corresponding element of the key column is  $\{2/3, 5, 1/3, -1/2\}$ , then which of the following variable will be leaving?

Select the correct option

- |                       |                                  |
|-----------------------|----------------------------------|
| <input type="radio"/> | Variable corresponding to '2/3'  |
| <input type="radio"/> | Variable corresponding to '-1/2' |
| <input type="radio"/> | Variable corresponding to '5'    |
| <input type="radio"/> | Variable corresponding to '1/3'  |



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Because we do not use negative value in the ratio we take small value in positive number.





MC200200058: SHAH KHALID

Time Left 88 sec(s)

MTH601:Quiz

Quiz Start Time: 04:59 PM, 24 July 2021

Question # 9 of 10 ( Start time: 05:06:42 PM, 24 July 2021 )

Total Marks: 1

Which of the following is the standard form of objective function corresponding to,"Min $Z=2x-11y$ , subject to  $x=5$  and  $y=7$ "? Where A's are artificial.

Select the correct option



$$z = 2x - 11y - MA1 + MA2$$



$$z = 2x - 11y + MA1 + MA2$$



$$z = 2x - 11y + MA1 - MA2$$



$$z = 2x - 11y - MA1 - MA2$$

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MC200200058: SHAH KHALID

Time Left 89 sec(s)

MTH601:Quiz

Quiz Start Time: 04:59 PM, 24 July 2021

Question # 6 of 10 ( Start time: 05:03:45 PM, 24 July 2021 )

Total Marks: 1

By Simplex method, to minimize ' $Z = 2x + 9y$ ' of an LP problem, if ' $z = A > 0$ ' for the initial iteration then for its next improved solution ( $0 < A < 100$ ), which of the following would be the next entering variable?

Select the correct option

 $x < 0$  $x > 0$  $y > 0$  $y < 0$ 

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MC200200058: SHAH KHALID

Time Left 85 sec(s)

MTH601:Quiz

Quiz Start Time: 04:59 PM, 24 July 2021

Question # 3 of 10 ( Start time: 05:00:51 PM, 24 July 2021 )

Total Marks: 1

Shortcoming of Big M method is that the value of M could be

\_\_\_\_\_.

Select the correct option



positive



very large



very small



negative

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MC180403550: HAFIZ MUHAMMAD HIRAN

Time Left 87 sec(s)

MTH601:Quiz

Quiz Start Time: 05:11 PM, 24 July 2021

Question # 1 of 10 ( Start Time: 05:11:06 PM, 24 July 2021 )

Total Marks: 1

In the initial iteration of Big M-method, the artificial variables appear in -----.

Select the correct option.

☐ Non-basic variables' set☒ Basis

Click to Save Answer &amp; Move to Next Question



In two phase method, for the phase-I, if the given problem has feasible solution then-----.

Select the correct option

- ☐ objective function is arbitrary but artificial is zero
- ☐ objective function is zero but artificial may arbitrary
- ☒ both objective function and artificial are zero
- ☐ both objective and artificial can have arbitrary values



While solving an LP problem by Simplex method, the inclusion of slacks in the constraints' inequalities helps in finding ----- variables.

Select the correct option.

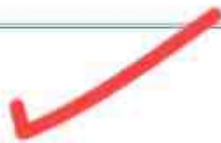
- ☐ non-basic
- ☐ decision
- ☒ basic
- ☐ artificial



After converting constraints into the respective Standard equalities, we have an LP problem of '4' equations in '6' variables, then in a given iteration, how many Infeasible VARIABLES are possible to exists?

Select the correct option.

- |                                  |    |
|----------------------------------|----|
| <input type="radio"/>            | 2  |
| <input type="radio"/>            | 4  |
| <input type="radio"/>            | 10 |
| <input checked="" type="radio"/> | 6  |





In two phase method, for the phase-I, the problem has infeasible solution if the minimum value of objective function -----.

Select the correct option.

☐ equal to zero

☒ greater than zero

☐ less than zero

☐ is imaginary



In Simplex standard table to solve an LP problem of Maximization, we choose the candidate for entering variable in-----.

Select the correct option

- ☐ Objective function with most positive coefficient
- ☐ Constraint with most positive coefficient
- ☒ Objective function with most negative coefficient
- ☐ Constraint with most negative coefficient

Quiz List

Quiz



Not secure

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MC200204868: MUI AMMAD RIZWAN

MTH601 Quiz

Question # 4 of 10 (Start time: 05:32:12 PM, 24 July 2021)

The inequality  $3x - 2y \geq 14$  is equivalent to \_\_\_\_\_

Select the correct option

☐  $-3x + 2y \leq -14$

☐  $-3x + 2y > 14$

☐  $3x - 2y \leq 14$

☐  $3x - 2y \leq -14$



acer

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BC160402828: Muhammad Zeeshan Sikandar

Time Left 88 sec(s)

MTH601:Quiz

Quiz Start Time: 05:27 PM, 24 July 2021

Question # 3 of 10 ( Start time: 05:31:32 PM, 24 July 2021 )

Total Marks: 1

In Simplex method, which of the following is the standard equality corresponding to the constraint " $3x+5y \geq 2$ "?

Select the correct option



$$3x+2y-S-A=2$$



$$3x+2y+S+A=2$$



$$3x+2y+S-A=2$$



$$3x+2y-S+A=2$$



Click to Save Answer or Move to Next Question



Quiz List Quiz

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MC2002043681 MUHAMMAD RIZWAN

MTH601 Quiz

Question # 3 of 10 ( Start time: 05:31:04 PM, 24 July 2021 )

In two phase method if the minimum value of objective function in the first phase is zero, then the solution of original problem \_\_\_\_\_

Select the correct option:

- ☐ does not exists
- ☐ none of these
- ☐ is uncertain
- ☒ exists



Quiz List

Quiz

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MIH601 Quiz

Question # 2 of 10 (Start time: 05:30:21 PM, 24 July 2021)

In two phase method if the minimum value of objective function in the first phase is greater than zero, then the solution of original problem

Select the correct option

- ☐ none of these
- ☐ is uncertain
- ☐ exists
- ☒ does not exists

Infeasible hoota h  
lekin idr wo option  
diyaa ni hwa so does  
not exist





BC160402828: Muhammad Zeeshan Sikandar

Time Left 88 sec(s)

MTH601:Quiz

Quiz Start Time: 05:27 PM, 24 July 2021

Question # 2 of 10 ( Start time: 05:29:50 PM, 24 July 2021 )

Total Marks: 1

In the Simplex method to solve an LP problem of maximization, if at the end of an iteration, there is a negative coefficient in the objective row then the given problem-----.

Select the correct option

- ☒ needs further improvement
- ☐ has been maximized
- ☐ has no solution
- ☐ cant be optimized

Click to Save Answer or Move to Next Question



MC200204868: MUHAMMAD RIZWAN

MTH601: Quiz

Question # 1 of 10 (Start time: 05:28:48 PM, 24 July 2021)

In two phase method, for the phase-I, if the given problem has feasible solution then——

Select the correct option

- |                                  |                                                         |
|----------------------------------|---------------------------------------------------------|
| <input type="radio"/>            | objective function is arbitrary but artificial is zero  |
| <input type="radio"/>            | both objective and artificial can have arbitrary values |
| <input checked="" type="radio"/> | both objective function and artificial are zero         |
| <input type="radio"/>            | objective function is zero but artificial may arbitrary |



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Time Left 88 sec(s)

MTH601:Quiz

Quiz Start Time: 05:27 PM, 24 July 2021

Question # 1 of 10 ( Start time: 05:27:50 PM, 24 July 2021 )

Total Marks: 1

The cost coefficient of artificial variable in Objective function is -----.

Select the correct option

- |                                  |          |
|----------------------------------|----------|
| <input type="radio"/>            | 1        |
| <input type="radio"/>            | > than 1 |
| <input type="radio"/>            | M        |
| <input checked="" type="radio"/> | 0        |

Click to Save Answer or Move to Next Question





While solving an LP problem by Simplex method, if we have '3' constraint equations in '5' variables then to find basic variables we have to put any ----- variables equal to zero.

Select the correct option.

- |                                  |   |
|----------------------------------|---|
| <input type="radio"/>            | 2 |
| <input type="radio"/>            | 1 |
| <input type="radio"/>            | 4 |
| <input checked="" type="radio"/> | 3 |



BC160402828: Muhammad Zeeshan Sikandar

Time Left 88 sec(s)

MTH601:Quiz

Quiz Start Time: 05:27 PM, 24 July 2021

Question # 4 of 10 ( Start time: 05:32:27 PM, 24 July 2021 )

Total Marks: 1

In two phase method, for the phase-I, if the objective function in terms of artificial variables is not minimized then the given problem has-----.

Select the correct option

- |                                  |                     |
|----------------------------------|---------------------|
| <input type="radio"/>            | Feasible solution   |
| <input type="radio"/>            | Optimal solution    |
| <input checked="" type="radio"/> | Infeasible solution |
| <input type="radio"/>            | Degeneracy          |

Click to Save Answer or Move to Next Question





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Time Left 88 sec(s)

MTH601:Quiz

Quiz Start Time: 05:27 PM, 24 July 2021

Question # 5 of 10 ( Start time: 05:33:41 PM, 24 July 2021 )

Total Marks: 1

In the Simplex method to solve an LP problem of minimization, if at the end of iteration, every entry of objective function row is negative then the given problem ---

Select the correct option

- ☐ can not be optimized
- ☐ needs further improvement
- ☐ has no solution
- ☒ has been minimized

Click to Save Answer &amp; Move to Next Question

Because to stop the iteration in Maximization all objective row coefficient are positive or zero. but in case of minimization to stop iteration the coefficient of objective function are all zero or negative.



MC200204868. MUHAMMAD RIZWAN

MTH601 Quiz

Question # 5 of 10 ( Start time: 05:33:44 PM, 24 July 2021 )

In graphical solution of solving Linear Programming problem to convert inequalities into equations, we \_\_\_\_\_.

Select the correct option

- ☐ use Surplus variables
- ☒ simply assume them to be equations
- ☐ use Artificial surplus variables
- ☐ use Slack variables



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Time Left 88 sec(s)

MTH601:Quiz

Quiz Start Time: 05:27 PM, 24 July 2021

Question # 6 of 10 ( Start time: 05:34:22 PM, 24 July 2021 )

Total Marks: 1

If any or all of the artificial variables do not leave the basis in the final solution, then this indicates that the problem

\_\_\_\_\_ .

Select the correct option

- |                                  |                          |
|----------------------------------|--------------------------|
| <input type="radio"/>            | may have a solution      |
| <input type="radio"/>            | non of these             |
| <input checked="" type="radio"/> | does not have a solution |
| <input type="radio"/>            | must have a solution     |

Click to Save Answer or Move to Next Question





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Time Left 89 sec(s)

MTH601:Quiz

Quiz Start Time: 05:27 PM, 24 July 2021

Question # 8 of 10 ( Start time: 05:35:56 PM, 24 July 2021 )

Total Marks: 1

In Simplex standard table to solve an LP problem of Maximization, we choose the candidate for entering variable in-----.

Select the correct option

- ☐ Constraint with most positive coefficient
- ☐ Objective function with most positive coefficient
- ☐ Constraint with most negative coefficient
- ☐ Objective function with most negative coefficient

Click to Save Answer or Move to Next Question





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Time Left 88 sec(s)

MTH601:Quiz

Quiz Start Time: 05:27 PM, 24 July 2021

Question # 10 of 10 ( Start time: 05:37:18 PM, 24 July 2021 )

Total Marks: 1

While solving an LP problem by Simplex method, if we have '3' constraint equations in '5' variables then to find basic variables we have to put any ----- variables equal to zero.

Select the correct option

|                                  |   |
|----------------------------------|---|
| <input type="radio"/>            | 4 |
| <input type="radio"/>            | 2 |
| <input type="radio"/>            | 1 |
| <input checked="" type="radio"/> | 3 |

Click to Save Answer &amp; Move to Next Question



Question # 9 of 10 (Start time: 05:37:06 PM, 24 July 2021)

By Simplex method, to maximize  $Z = 2x + 9y$  of an LP problem, if ' $z=0$ ' for the initial iteration then for its next improved solution, which of the following would be the next entering variable?

Select the correct option

☐  $x < 0$ ☐  $x > 0$ ☒  $y < 0$ ☐  $y > 0$ 

Because the coefficient of  $x$  is 2 and  $y$  is 9.

$x$  increase  $z$  at the rate of 2 and  
 $y$  increase  $z$  at the rate of 9.  
so  $y$  is the entering variable.

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Time Left 82 sec(s)

Quiz Start Time: 05:28 PM, 24 July 2021

MTH601: Quiz

Total Marks: 1

Question # 9 of 10 (Start time: 05:37:06 PM, 24 July 2021)

By Simplex method, to maximize  $Z = 2x + 9y$  of an LP problem, if ' $z=0$ ' for the initial iteration then for its next improved solution, which of the following would be the next entering variable?

Select the correct option

☐  $x < 0$ ☐  $x > 0$ ☒  $y < 0$ ☐  $y > 0$ 5:37 PM  
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Time Left 89 sec(s)

MTH601:Quiz

Quiz Start Time: 05:27 PM, 24 July 2021

Question # 7 of 10 ( Start time: 05:35:19 PM, 24 July 2021 )

Total Marks: 1

When using Big M method, the objective function should not contain \_\_\_\_\_ variable(s).

Select the correct option

Reload Math Equations

- ☒ artificial
- ☐ artificial and slack
- ☐ slack
- ☐  $x_1$

Click to view Answer & Move to Next Question



Quiz List x Quiz x +

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MC200204868: MUHAMMAD RIZWAN

MTH601 Quiz

Question # 10 of 10 ( Start time: 05:38:03 PM, 24 July 2021 )

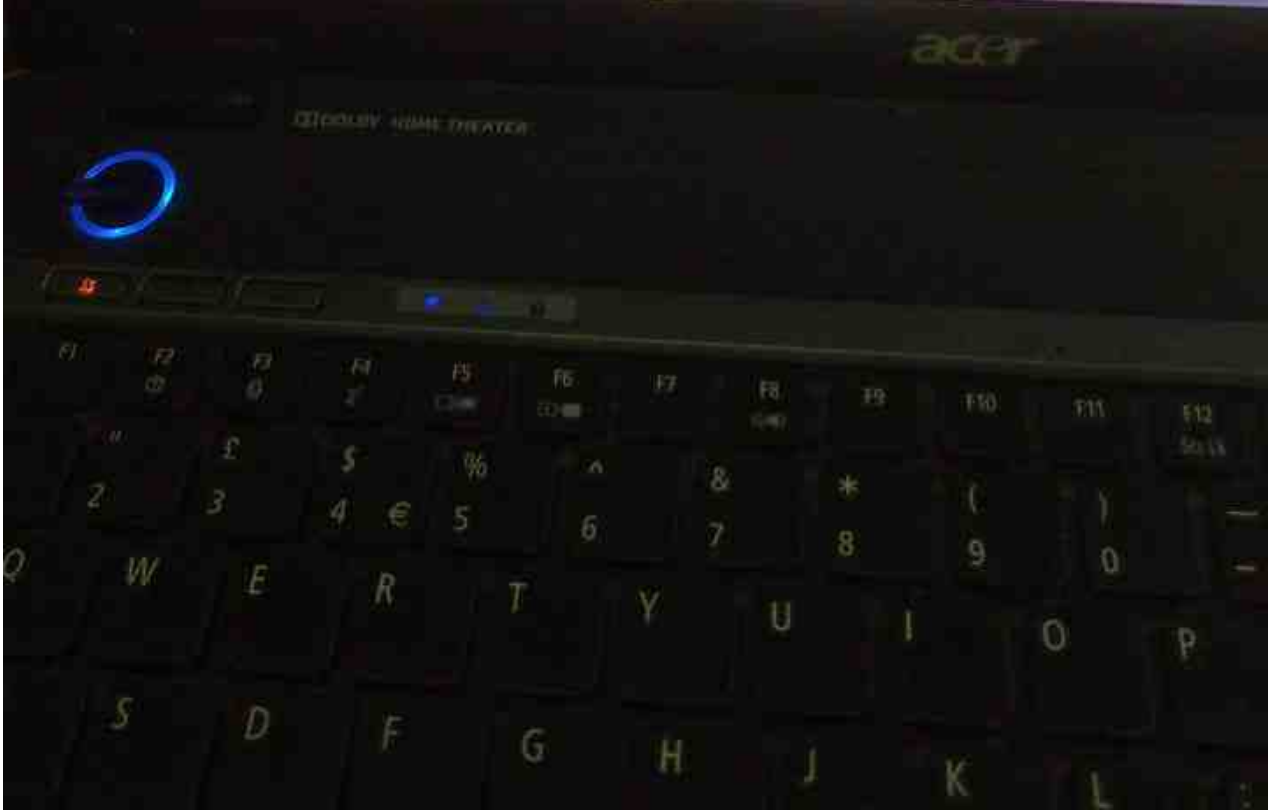
In two phase method, for the phase-I, if the objective function in terms of artificial variables is not minimized then the given problem has:-----

Select the correct option

☐

Feasible solution

☒

Infeasible solution☐☐

MC200204868: MUHAMMAD RIZWAN

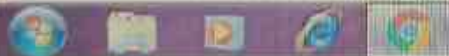
MTH601: Quiz

Question # 8 of 10 (Start time: 05:36:23 PM, 24 July 2021)

In two phase method, for the phase-I, if the objective function has zero value with all vanishing artificial variables then we ———

Select the correct option

- ☒ proceed for 2nd phase
- ☐ Infeasible solution
- ☐ necessarily have optimal solution
- ☐ can't proceed for 2nd phase



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Quiz List

Quiz

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MC200204868: MUHAMMAD RIZWAN

MTH601.Quiz

Question # 7 of 10 ( Start time: 05:35:39 PM, 24 July 2021 )

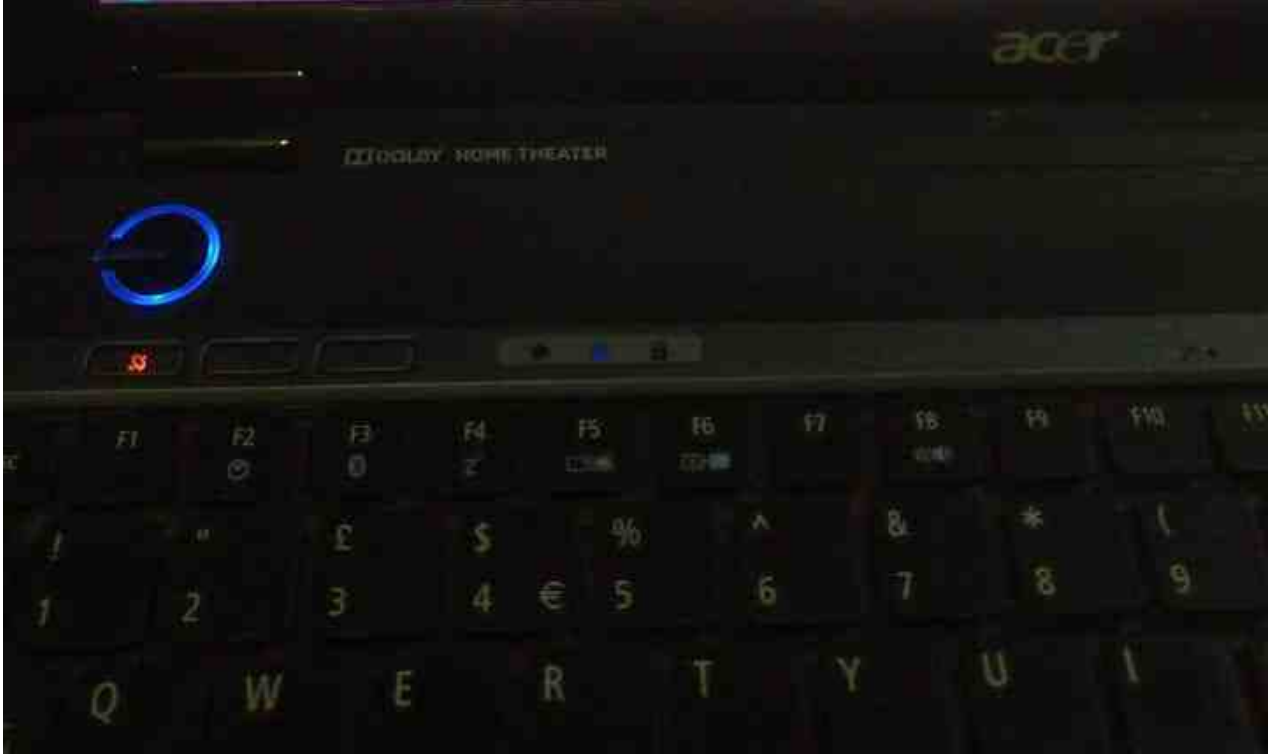
In a feasible region, if the end points of the line segment are basic solutions, then all the points between these two will ———

Select the correct option:

☐

be optimal

☐

be non basic☐☐

Question # 6 of 10 ( Start time: 05:34:45 PM, 24 July 2021 )

While solving a Linear Programming problem by Simplex Method, an inequality says  $2x - 3y \leq 5$  is transformed into strict equality of the form \_\_\_\_\_ where  $s \geq 0$ .

Select the correct option



$$2x - 3y + s + A = 5$$



$$2x - 3y + s = 5$$



$$2x - 3y - s + A = 5$$



$$2x - 3y - s = 5$$