

X

NPTEL

reviewer4@nptel.iitm.ac.in ▼

Courses » Advanced Green Manufacturing Systems

Announcements **Course** Ask a Question Progress FAQ

## Unit 8 - Week 6

Register for  
Certification exam

### Course outline

How to access  
the portal

Week 0

Week 1

Week 2

Week 3

Week 4

Week 5

Week 6

- Lecture 19:  
Solving  
optimization  
problems
- Lecture 20:  
Solution using  
Excel
- Lecture 21: MS  
Excel Solver  
demonstration
- Lecture 22:  
Solving  
optimization  
problems using  
MS Excel
- Quiz :

## Assignment 6

The due date for submitting this assignment has passed.

As per our records you have not submitted this **Due on 2019-03-13, 23:59 IST.**  
assignment.

Goldilocks needs to find at least 12 lb of gold and at least 18 lb of silver to pay the monthly rent. There are two mines in which Goldilocks can find gold and silver. Each day that Goldilocks spends in mine 1, she finds 2 lb of gold and 2 lb of silver. Each day that Goldilocks spends in mine 2, she finds 1 lb of gold and 3 lb of silver. Formulate an LP to help Goldilocks meet her requirements while spending as little time as possible in the mines. Consider the variables  $x$ , as the number of days in mine 1 and  $y$  as the number of days in mine 2.

1) Choose the correct constraint equation for the Gold from below. **2 points**

- $2x+3y \leq 18$
- $2x+3y \geq 18$
- $2x+y \geq 12$
- $2x+y \leq 6$

**No, the answer is incorrect.**

**Score: 0**

**Accepted Answers:**

$2x+y \geq 12$

2) Choose the most appropriate constraint for silver from the options given below. **2 points**

- $2x+y \geq 12$
- $2x+y \leq 4$
- $2x+3y \leq 5$
- $2x+3y \geq 18$

**No, the answer is incorrect.**

**Score: 0**

**Accepted Answers:**

© 2014 NPTEL - Privacy & Terms - Honor Code - FAQs -

A project of



NPTEL

National Programme on  
Technology Enhanced Learning

In association with

NASSCOM®

Funded by

Feedback For  
Week 6

Week 7

Week 8

Week 9

Week 10

Week 11

Week 12

$x+y \leq 30$

$x+y \geq 60$

**No, the answer is incorrect.**  
**Score: 0**  
**Accepted Answers:**  
 $x+y \leq 30$

4) As per the question, the objective function should maximize the sum of variables. Is the statement above true or false? **2 points**

True

False

**No, the answer is incorrect.**  
**Score: 0**  
**Accepted Answers:**  
*False*

5) For the optimization problem, develop the mathematical model and encode it into the microsoft excel spreadsheet. **2 points**  
What is the objective function value (Considering the continuous nature of variables)?

$x=4.5, y=3$

$x=4, y=4$

$x=7, y=10$

$x=2, y=5$

**No, the answer is incorrect.**  
**Score: 0**  
**Accepted Answers:**  
 $x=4.5, y=3$

Previous Page

End