



FACULTY OF COMPUTER SCIENCE AND INFORMATION TECHNOLOGY

INSTITUTE OF APPLIED COMPUTER SYSTEMS

Introduction to Operations Research

Assignment 4 – Two-Variable Mathematical Programming

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TASK

Maximize:

- $Z = 10x_1 + 7x_2$

Subject to:

- $2x_1 \leq 29$
- $3x_2 \leq 17$
- $2x_1 + x_2 \leq 23$
- $x_1 \geq 0, x_2 \geq 0$

CODE

```
1  /*****
2   * OPL 22.1.1.0 Model
3   * Author: Emir
4   * Creation Date: 23 Mar 2023 at 23:33:13
5   *****/
6
7  dvar int+ x1;
8  dvar int+ x2;
9
10 maximize
11     10 * x1 + 7 * x2;
12
13 subject to {
14     2 * x1 <= 29;
15     3 * x2 <= 17;
16     2 * x1 + x2 <= 23;
17 }
```

RESULT

Solution with objective 125		
Name		Value
Decision variables (2)		
x1		9
x2		5