

# Программа INTERAKT.EXE

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Исследование операций  
с применением компьютера  
Версия 2.00a (2007)

INTERACTIVE PROGRAMMING  
Reading problem from a file

INTERAKT /2

Number of variables (max. 5) 2  
Number of objective functions (max. 5) 5  
Number of constraints (max. 5) 2

Obj.f.	x( 1)	x( 2)	
1	1.00	1.00	——> max
2	1.00	3.00	——> max
3	2.00	1.00	——> max
4	2.00	3.00	——> max
5	-2.00	-2.00	——> max

INTERACTIVE PROGRAMMING  
Reading problem from a file

Number of variables (max. 5)  
Number of objective functions (max. 5)  
Number of constraints (max. 5)

Obj.f.	x( 1)	x( 2)		
1	1.00	2.00	≤	8.00
2	4.00	0.00	≤	16.00
	0.00	0.00		Lower bound
	100000.00	100000.00		Upper bounds

Iteration 1

Solution	Criterion 1	Criterion 2	Criterion 3	Criterion 4	Criterion 5
1	6.00	10.00	10.00	14.00	-12.00
2	4.00	12.00	4.00	12.00	-8.00
3	6.00	10.00	10.00	14.00	-12.00
4	6.00	10.00	10.00	14.00	-12.00
5	0.00	0.00	0.00	0.00	0.00

Do you want to continue procedure ?

INTERACTIVE PROGRAMMING  
Solving the problem

INTERAKT /5

Iteration 1

Solution	Criterion 1	Criterion 2	Criterion 3	Criterion 4	Criterion 5
1	6.00	10.00	10.00	14.00	-12.00
2	4.00	12.00	4.00	12.00	-8.00
3	6.00	10.00	10.00	14.00	-12.00
4	6.00	10.00	10.00	14.00	-12.00
5	0.00	0.00	0.00	0.00	0.00

  

Value	Criterion 1	Criterion 2	Criterion 3	Criterion 4	Criterion 5
pessim.					
optim.					

Select pessimistic value for criterion 1

INTERACTIVE PROGRAMMING  
Solving the problem

INTERAKT /6

Iteration 1

Solution	Criterion 1	Criterion 2	Criterion 3	Criterion 4	Criterion 5
1	6.00	10.00	10.00	14.00	-12.00
2	4.00	12.00	4.00	12.00	-8.00
3	6.00	10.00	10.00	14.00	-12.00
4	6.00	10.00	10.00	14.00	-12.00
5	0.00	0.00	0.00	0.00	0.00

Value	Criterion 1	Criterion 2	Criterion 3	Criterion 4	Criterion 5
pessim.	0.00				
optim.					

Select optimistic value for criterion 1

Iteration 1

Solution	Criterion 1	Criterion 2	Criterion 3	Criterion 4	Criterion 5
1	6.00	10.00	10.00	14.00	-12.00
2	4.00	12.00	4.00	12.00	-8.00
3	6.00	10.00	10.00	14.00	-12.00
4	6.00	10.00	10.00	14.00	-12.00
5	0.00	0.00	0.00	0.00	0.00
Value	Criterion 1	Criterion 2	Criterion 3	Criterion 4	Criterion 5
pessim.	0.00	0.00	0.00	0.00	-12.00
optim.	6.00	12.00	10.00	14.00	0.00

Is it possible to continue procedure ?  Yes  No

INTERACTIVE PROGRAMMING  
Solving the problem

INTERAKT /8

Iteration 1

Value	Criterion 1	Criterion 2	Criterion 3	Criterion 4	Criterion 5
pessim.	0.00	0.00	0.00	0.00	-12.00
optim.	6.00	12.00	10.00	14.00	0.00

Const.	x(1)	x(2)		b
1	1.00	2.00	≤	8.00
2	4.00	0.00	≤	16.00
3	1.00	1.00	≥	3.00
4	1.00	3.00	≥	0.00
5	2.00	1.00	≥	0.00
6	2.00	3.00	≥	0.00
7	-2.00	-2.00	≥	-12.00

Enter right hand sides of additional constraints for problems



Iteration 1

Problem(1,1)			
Obj.func.	x(1)	x(2)	
1	1.00	1.00	---> max
Const.	x(1)	x(2)	b
1	1.00	2.00	≤ 8.00
2	4.00	0.00	≤ 16.00
3	1.00	1.00	≥ 3.00
4	1.00	3.00	≥ 3.00
5	2.00	1.00	≥ 4.00
6	2.00	3.00	≥ 6.00
7	-2.00	-2.00	≥ -12.00

Iteration 1

Problem(1,2)			
Obj.func.	x(1)	x(2)	
2	1.00	3.00	---> max
Const.	x(1)	x(2)	b
1	1.00	2.00	≤ 8.00
2	4.00	0.00	≤ 16.00
3	1.00	1.00	≥ 3.00
4	1.00	3.00	≥ 3.00
5	2.00	1.00	≥ 4.00
6	2.00	3.00	≥ 6.00
7	-2.00	-2.00	≥ -12.00

Iteration 1

Problem(1,3)			
Obj.func.	x(1)	x(2)	
3	2.00	1.00	---> max
Const.	x(1)	x(2)	b
1	1.00	2.00	≤ 8.00
2	4.00	0.00	≤ 16.00
3	1.00	1.00	≥ 3.00
4	1.00	3.00	≥ 3.00
5	2.00	1.00	≥ 4.00
6	2.00	3.00	≥ 6.00
7	-2.00	-2.00	≥ -12.00

Iteration 1

Problem(1,4)			
Obj.func.	x(1)	x(2)	
4	2.00	3.00	---> max
Const.	x(1)	x(2)	b
1	1.00	2.00	≤ 8.00
2	4.00	0.00	≤ 16.00
3	1.00	1.00	≥ 3.00
4	1.00	3.00	≥ 3.00
5	2.00	1.00	≥ 4.00
6	2.00	3.00	≥ 6.00
7	-2.00	-2.00	≥ -12.00

Iteration 1

Problem(1,5)			
Obj.func.	x(1)	x(2)	
5	-2.00	-2.00	---> max
Const.	x(1)	x(2)	b
1	1.00	2.00 ≤	8.00
2	4.00	0.00 ≤	16.00
3	1.00	1.00 ≥	3.00
4	1.00	3.00 ≥	3.00
5	2.00	1.00 ≥	4.00
6	2.00	3.00 ≥	6.00
7	-2.00	-2.00 ≥	-12.00

Iteration 6

Solution	Criterion 1	Criterion 2	Criterion 3	Criterion 4	Criterion 5
1	5.38	10.62	8.15	13.39	-10.77
2	5.00	11.00	7.00	13.00	-10.00
3	5.38	9.88	8.52	13.02	-10.77
4	5.38	10.62	8.15	13.39	-10.77
5	4.78	9.88	7.01	12.11	-9.56

Select the final solution

**Final solution**

Decision variables values		Criteria values	
x(1)	2.77	1.	5.38
x(2)	2.62	2.	10.62
		3.	8.15
		4.	13.39
		5.	-10.77