Optimizavimo metodai

4 lab.

Tiesinis programavimas

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Tiesinis Simpleksas

function simplextiesinis

C = [2,-3,0,-5,0,0,0];

A=[-1,1,-1,-1,1,0,0;2,4,0,0,0,1,0;0,0,1,1,0,0,1];

B=[4;3;0];

[eilSk,stulpSk] = size(A);

minC = 0;

beta = [5,6,7];

[m,nr] = min(C);

while m<0

lamda = B./A(:,nr);

for x=1:length(lamda)

if lamda(x)<0

lamda(x)=Inf;

endif

endfor

[lamdaK,k]=min(lamda);

beta(k)=nr;

B(k) =B(k)./A(k,nr);

A(k,:)=A(k,:)./A(k,nr);

minC = minC - B(k)\*C(nr);

C = C - A(k,:)\*C(nr);

for i=1:eilSk

% fprintf('%g %g %g %g %g %g %g |%g \n',A(i,:),B(i));

A(i,:);

if i~=k

B(i) = B(i) - B(k)\*A(i,nr);

A(i,:) = A(i,:) - A(k,:)\*A(i,nr);

endif

endfor

[m,nr] = min(C);

endwhile

X=[0,0,0,0,0,0,0];

for y=1:length(beta)

X(beta(y))=B(y);

endfor

fprintf('X = (%g %g %g %g)\nmin = %g \n', X(1:4), -minC);

endfunction

Atsakymai

Su studento numeriu :

Optimalus sprendinys = (0 0.75 0 0)

min = -2.25

Bazė = (0 0.75 0 0 3.25 0 0)

Su duotais:

Optimalu sprendinys = (0 2.5 0 3)

min = -22.5

Bazė = (0 2.5 0 3 8.5 0 0)