

Minimization of matrix problems.

linprog - Linear programming.

$$f(x) = -5x_1 - 4x_2 - 6x_3$$

$$x_1 - x_2 + x_3 \leq 20$$

$$3x_1 + 2x_2 + 4x_3 \leq 42$$

$$3x_1 + 2x_2 \leq 30$$

$$x_1 \geq 0 \quad x_2 \geq 0 \quad x_3 \geq 0$$

Opt1 (m-file):

```
f=[-5;-4;-6];
```

```
A=[1 -1 1;3 2 4;3 2 0];
```

```
h=[20;42;30];
```

```
lb=zeros(3,1);
```

```
[x,fval,exitflag,output,lamda]=linprog(f,A,b,[],[],lb)
```

Opt1 (Command Window):

```
>> opt1
```

```
Optimization terminated.
```

```
x = [ 0.0000    1.0000    0.0000 ]
```