

## example2

$$\min_{x \in \mathbb{R}^6} \max_i |f_i(x)|$$

$$x \in \mathbb{R}^6$$

Subject to

$$-x_1 + s \leq 0$$

$$x_1 - x_2 + s \leq 0$$

$$x_2 - x_3 + s \leq 0$$

$$x_3 - x_4 + s \leq 0$$

$$x_4 - x_5 + s \leq 0$$

$$x_5 - x_6 + s \leq 0$$

$$x_6 - \frac{7}{2} + s \leq 0$$

Where

$$f_i(x) = \frac{1}{15} + \frac{2}{15} * \sum_{j=1}^6 \cos(2 * \pi * x_j * \sin(t_i)) + \cos(t * \pi * \sin(t_i))$$

$$t_i = \frac{\pi}{180} * \left( \frac{17}{2} + \frac{i}{2} \right), \quad i = 1:163$$

$$s = 0.425$$

```

alignl stack{min~max~abs{f_i(x)} #
x in setR^6#
"Subject to"#
-x_1 ~+ ~s <=0#
x_1-x_2 + s<=0#
x_2-x_3 + s<=0#
x_3-x_4 + s<=0#
x_4-x_5 + s<=0#
x_5-x_6 + s<=0#
x_6-7 over 2 +s <=0#
"Where"#
f_i(x) = 1 over 15 + 2 over 15*sum from{j=1} to{6}
cos(2*%pi*x_j*sin(t_i))+cos(t*%pi*sin(t_i))#
t_i = %pi over 180 *(17 over 2+i over 2),~i=1:163#
s = 0.425
}

```