Notes

For the CSV upload functionality to work, the csv must have columns of “people_served”, and “incentive”, and these column names must be exact. For the chart to work and additional two columns “program_name” and “past_funding” must be supplied. All columns except for program_name must be numeric.

Definitions

$$x_i = The\ number\ of\ people\ served\ by\ center\ i$$

$$x_i \in Z^+$$

$$y_i = Whether\ center\ i\ received\ an\ incentive\ for\ operating\ in\ unincorporated\ Pierce\ County$$

$$y_i \in \{0, 1\}$$

$$TF = Scalar\ for\ total\ funding$$

$$BF = Scalar\ for\ base\ Funding$$

$$UF = Scalar\ for\ unincorporated\ incentive\ funding$$

$$Cap = Scalar\ for\ total\ amount\ of\ funding\ an\ individual\ center\ can\ recieve$$

$$PP = Per\ Person\ Funding\ Rate$$

$$TF, BF, UF, Cap, PP \in R^+$$

Problem statements

$$\boldsymbol{min_{PP}} \left| \boldsymbol{TF} - (\sum_{\boldsymbol{i=1}}^{\boldsymbol{n}} \boldsymbol{min}(\boldsymbol{BF} + \boldsymbol{UF} * \boldsymbol{y_i} + \boldsymbol{PP} * \boldsymbol{x_i},\ \ \boldsymbol{cap})) \right|$$