

Find a TDI-system

Exercise 14.9

Write a program that takes an integral system $Ax \leq b$ as input, and finds a TDI-system that also defines polyhedron $\{x \mid Ax \leq b\}$.

- ▶ All groups will implement the program in C++
- ▶ Please feel free to consult any literature to implement the procedure efficiently but refrain from using high level libraries.
- ▶ Each group will submit 30 random inputs in the following format

```
A 2 3
1 3 4
3 3 5
b
6
8
```

- ▶ First row defines the size of matrix A [row_size] [column_size]
- ▶ Afterwards rows of integral A are written one after another
- ▶ Afterwards b indicates the start of vector b.
- ▶ Afterwards entries of b are listed.

Evaluation:

- ▶ We will pool submitted inputs and run all the submissions on the inputs
- ▶ The marks will be decided on the correctness of the submissions, their relative performances, and size of the found TDI-systems