Definition 0.0.1 (absolut value) $|x| = \max(x, -x)$

Definition 0.0.2 ($\ell_1 - Norm$)

$$\|x\|_1 := \sum_{i=1}^{n} |x_i|$$

Definition 0.0.3 ($\ell_2 - Norm$)

$$\|x\|_2 := \left(\sum_{i=1}^{n} |x_i|^2 \right)^{\frac{1}{2}}$$

Definition 0.0.4 (floor,ceil,Sawtooth function)

$$\lfloor x \rfloor := \max\{z \in Z | z \leq x\} \tag{1}$$
$$\lceil x \rceil := \min\{z \in Z | z \geq x\} \tag{2}$$
$$\{x\} := x - \lfloor x \rfloor \tag{3}$$

many pages later...

$$\left\| \lfloor \|y\|_2 - 3 \rfloor \hat{A}x \right\|_1 \tag{4}$$
$$\left\| \lceil \|y\|_2 - 3 \rceil \hat{A}x \right\|_1 \tag{5}$$
$$\left\{ \left\| (\|y\|_2 - 3) \hat{A}x \right\|_1 \right\} \tag{6}$$