N7 a) 11 20112 EVM 1120110; 20: m  $|| || ||_{\mathcal{L}} = \sqrt{\frac{2}{2}} ||_{\mathcal{L}(i)^2} \leq \sqrt{m \cdot (m\alpha)c} ||_{\mathcal{L}(i)}|^2 = \sqrt{m} ||_{\mathcal{L}(i)}|^2 = \sqrt{m} ||_{\mathcal{L}(i)}|^2$ 1101112 5 Vm 1101110, 4. m.g Eun  $SC_i^* = masc SC_j, mo 1150*11_2 = \sqrt{m} 1150*11_\infty$ Ween serve m=1 of 11 All as ENT 11 All2 A: m×n  $||A||_{\lambda} = \sup_{s \in +0} \frac{||Asc||_{\lambda}}{||sc||_{\lambda}} = \sup_{\lambda \neq 0} \frac{\sqrt{2}(Asc)_{i}^{2}}{\sqrt{2}(Asc)_{i}^{2}} = \sum_{s \in +\infty} \frac{||Asc||_{\lambda}}{\sqrt{2}(Asc)_{i}^{2}} = \sum_{s \in +\infty} \frac{$ JC: N AJL: M  $= \sup_{\lambda \neq 0} \frac{\sqrt{2}(\frac{2}{3}\alpha_{ij})^{2}}{113(112)} > \sup_{\lambda \neq 0} \frac{\sqrt{2}(\frac{2}{3}\alpha_{ij})^{2}}{\sqrt{n} ||3(11)||_{\infty}} >$  $\frac{2}{3} \sup_{\lambda \neq 0} \frac{\sqrt{max(\frac{n}{2}a_{ij})^{2}}}{\sqrt{n} |I| \times |I|_{\infty}} = \sup_{\lambda \neq 0} \frac{max|\frac{\pi}{2}a_{ij} \times_{j}|}{\sqrt{n} |I| \times |I|_{\infty}} = \sup_{\lambda \neq 0} \frac{|I| A \times |I|_{\infty}}{\sqrt{n} |I| \times |I|_{\infty}}$ = 1 11 All == => Jn 1/A1/2 > 1/A1/2 , 4.m.g