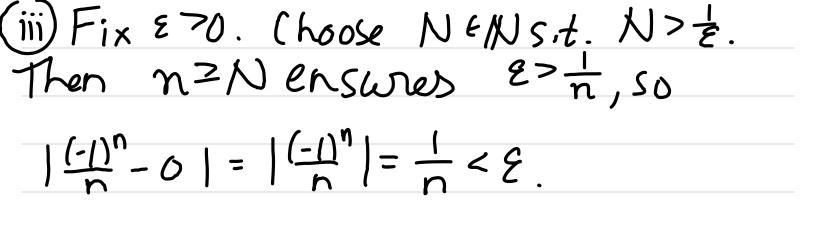
Homework 3 Solutions C Katy Crusy, 2024 i) Fix 270 arbitrary. Choose NE/N so that N>=+2, Which is possible 2 NI an current n = N ensures () $|n-z| = |n-z| = \frac{1}{n-z} < \varepsilon$. nzµ>2 nzN>+2 <=>n-2>-{ $\langle = \rangle_{\mathcal{E}} > \frac{1}{n-2}$ Since 2>0 was arbitrary. This gives the result. (i) Fix 270. Choose NE/NS.t. N>7 Then n=Nenswres E>#, so $\frac{|2n|}{n+2} - 2| = \frac{|2n-2(n+2)|}{n+2} = \frac{|-4|}{n+2} = \frac{|4|}{n+2} < \mathcal{E}.$ Since E>O was arbitrary, this gives the result.



Since 2>0 was arbitrary, this gives the result.