$$\bigcap_{\mathfrak{m}} \mathfrak{m} = \mathfrak{p} \cap \mathbb{G} = 0 \Rightarrow \mathbb{G} \text{ ganz}$$

$$0 \neq \mathfrak{p} \triangleleft {}^{X}\underset{\bullet}{\triangle}\mathbb{G} \Rightarrow \bigvee_{\gimel}^{\mathfrak{p} \llcorner 0} \min r = \deg \gimel$$

$$0 \notin \gimel_r^{\mathbb{N}} \Rightarrow \mathbb{G} \xrightarrow[\text{inj}]{\text{lic}} \mathbb{G}/\gimel_r^{\mathbb{N}} \ni \gimel_r \text{ inv}$$

$$\mathfrak{m} \not\ni \gimel_r \Rightarrow \mathfrak{p} + \mathfrak{m}\, {}^{X}\underset{\bullet}{\triangle}\mathbb{G} \not\ni 1$$

$$\lightning\ 1 \in \mathfrak{p} + {}^{X}\underset{\bullet}{\triangle}\mathfrak{m} \Rightarrow \bigvee_{\daleth}^{\mathfrak{p}} {}^{X}\underset{\bullet}{\triangle}\mathfrak{m} \ni {}^{X}\daleth - 1 = \underbrace{\daleth_i}_{\in \mathfrak{m}} X^i$$

$$\underset{\text{Eucl}}{\Rightarrow} \underbrace{{}^{X}\daleth - 1}\, X^{r-1} = {}^{X}\gimel\, {}^{X}\daleth + {}^{X}\acute{\daleth}$$

$${}^{X}\dot{\daleth} \in {}^{X}\underset{\bullet}{\triangle}\underbrace{\mathbb{G}/\gimel_r^{\mathbb{N}}} \Rightarrow \bigvee_{\ell}^{\mathbb{N}} \gimel_r^{\ell} \underbrace{\daleth - 1}\, X^{r-1} = {}^{X}\gimel\, {}^{X}\beth + {}^{X}\acute{\beth}$$

$${}^{X}\underset{\bullet}{\triangle}\mathbb{G} \ni {}^{X}\dot{\beth} = \dot{\beth}_i X^i \Rightarrow \gimel_r^{\ell} \daleth_i X^i X^{r-1} = {}^{X}\gimel\, \beth_i X^i + \acute{\beth}_i X^i$$

$$\Rightarrow 0 = \underbrace{\gimel_r^{\ell}\daleth_i + \mathfrak{m}}_{= 0 + \mathfrak{m}} X^{i+r-1} = \overbrace{\underbrace{\gimel_r + \mathfrak{m}}_{\neq 0 + \mathfrak{m}} X^r + \underbrace{\gimel_k + \mathfrak{m}} X^k\ \underbrace{\beth_i + \mathfrak{m}}} X^i + \underbrace{\acute{\beth}_i + \mathfrak{m}} X^i$$

$$\underset{\text{eind}}{\Rightarrow} 0 = \underbrace{\acute{\beth}_i + \mathfrak{m}} X^i \Rightarrow \acute{\beth}_i + \mathfrak{m} = 0 + \mathfrak{m} \Rightarrow \acute{\beth}_i \in \mathfrak{m}$$

$$\Rightarrow 0 \neq \underset{\notin \mathfrak{m}}{\gimel_r^{\ell}} X^{r-1} + \sum_i^r \underset{\in \mathfrak{m}}{\acute{\beth}_i} X^i = \gimel_r^{j} \underset{\in \mathfrak{p}}{{}^{X}\daleth} X^{r-1} + \underset{\in \mathfrak{p}}{{}^{X}\gimel}\, {}^{X}\beth \in \mathfrak{p}$$

$$\bigwedge_{\mathfrak{m} \not\ni \gimel_r} \mathfrak{p} + \mathfrak{m}\, {}^{X}\underset{\bullet}{\triangle}\mathbb{G} \underset{\neq}{\trianglelefteq} {}^{X}\underset{\bullet}{\triangle}\mathbb{G} \Rightarrow \bigvee \mathfrak{p} + \mathfrak{m}\, {}^{X}\underset{\bullet}{\triangle}\mathbb{G} \sqsubset \tilde{\mathfrak{m}} \underset{\max}{\triangleleft} {}^{X}\underset{\bullet}{\triangle}\mathbb{G}$$

$$\Rightarrow \mathfrak{m} \sqsubset \mathfrak{m}\, {}^{X}\underset{\bullet}{\triangle}\mathbb{G} \sqsubset \tilde{\mathfrak{m}} \Rightarrow \mathfrak{m} \sqsubset \tilde{\mathfrak{m}} \cap \mathbb{G}$$

$$\lightning\ \mathfrak{m} \underset{\neq}{\sqsubseteq} \tilde{\mathfrak{m}} \cap \mathbb{G} \Rightarrow \tilde{\mathfrak{m}} \cap \mathbb{G} = \mathbb{G} \Rightarrow 1 \in \tilde{\mathfrak{m}}\ \lightning$$

$$\mathfrak{m} = \tilde{\mathfrak{m}} \cap \mathbb{G}$$

$$\mathfrak{p} \sqsubset \mathcal{I} = \bigcap_{\mathfrak{p} \sqsubset \widetilde{\mathfrak{m}} \triangleleft^{X} \underset{\bullet}{\triangleright} \mathbb{G}}^{\widetilde{\mathfrak{m}} \cap \mathbb{G} \in \mathfrak{m}} \widetilde{\mathfrak{m}}$$

$$\mathcal{I} \cap \mathbb{G} \sqsubset \bigcap_{\mathfrak{m} \not\ni 1_r} \mathfrak{m}$$

$$\mathfrak{m} \not\ni 1_r \Rightarrow \mathcal{I} \sqsubset \widetilde{\mathfrak{m}} \Rightarrow \mathcal{I} \cap \mathbb{G} \sqsubset \widetilde{\mathfrak{m}} \cap \mathbb{G} = \mathfrak{m}$$

$$\mathcal{I} \cap \mathbb{G} = 0$$

$$q \in \mathcal{I} \cap \mathbb{G} \Rightarrow q\,1_r \in \bigcap_{1_r \notin \mathfrak{m}} \mathfrak{m} \cdot \bigcap_{1_r \in \mathfrak{m}} \mathfrak{m} \sqsubset \bigcap \mathfrak{m} = 0 \Rightarrow q\,1_r = 0 \underset{\text{ganz}}{\Rightarrow} q = 0$$