

April

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4:33 PM

$$\begin{array}{l} \mathbb{E} \longleftrightarrow \{e\} = \text{Gal}(E/E) \\ | [E:K] \quad |H| \\ K \longleftrightarrow H = \text{Gal}(E/K) \\ | [K:F] \quad [G:H] \\ F \longleftrightarrow G = \text{Gal}(E/F) \end{array} \left. \vphantom{\begin{array}{l} \mathbb{E} \\ K \\ F \end{array}} \right\} \begin{array}{l} \text{IF } K \text{ is splitting,} \\ H \text{ is normal and} \\ \text{Gal}(K/F) = G/H \\ = \text{Gal}(E/F) / \text{Gal}(E/K) \end{array}$$