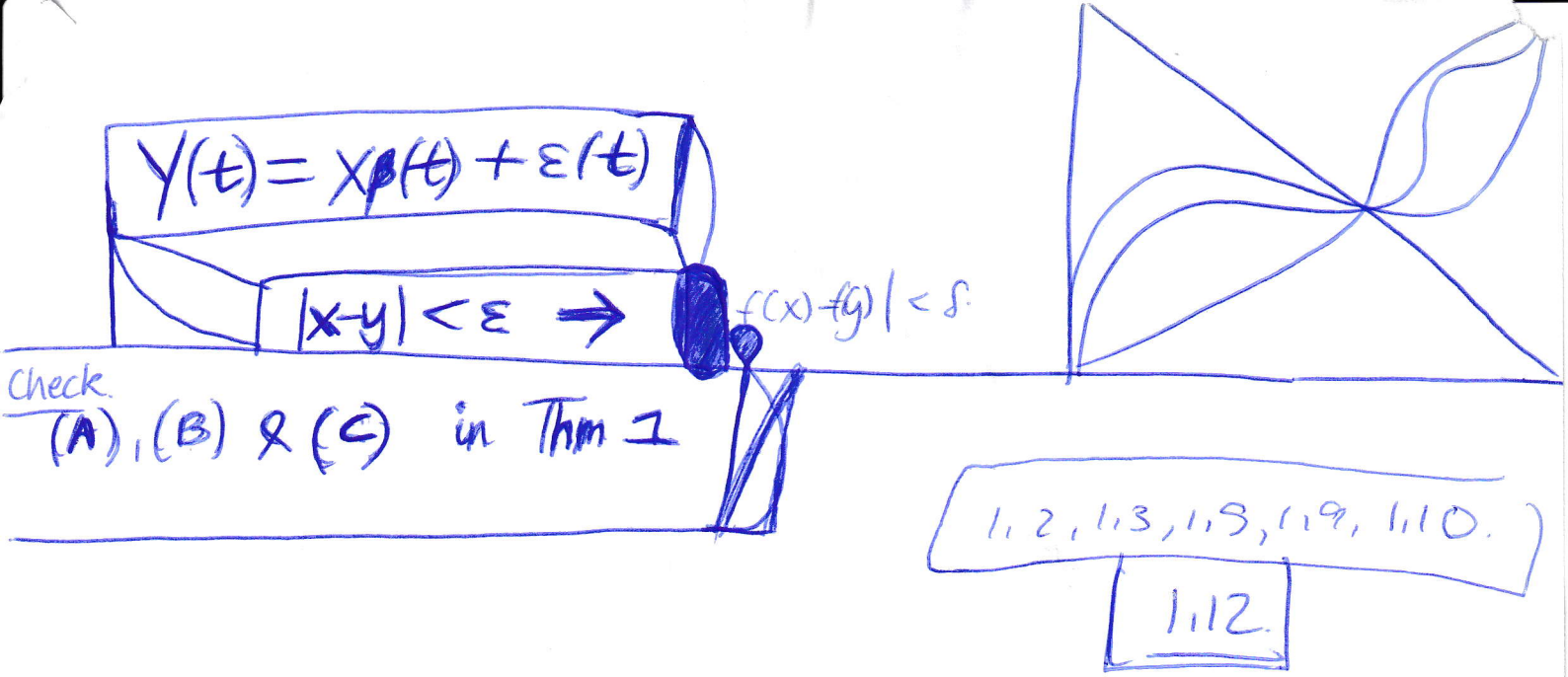

1.2, 1.3, 1.5, 1.9, 1.10.

1.12

$|c_i| < G \Rightarrow \frac{1}{|c_i|} > \frac{1}{G}$

$\Rightarrow \exists\, |c_i|\,\|z\| > \eta \Rightarrow \|z\| > \eta/|c_i| > \eta/G$

$C(S) \subset C^\infty(S)$

$\mathbb{E}[c_i Z_{ni} \mid \& Z_{ni}]$ so $\sup_{C(S)} \le \sup_{C^\infty(S)}$

$\tilde{X}_n = \sum c_i Z_{ni} \qquad X_n = \sum Z_{ni} - \mathbb{E}Z_{ni}$

~~$\mathbb{E}\tilde{X}_n = \sum \mathbb{E}c_i \mathbb{E}Z_{ni}$~~

$$\mathbb{E}\,\tilde{X}_n(s)\,\tilde{X}_n(t) = \mathbb{E}\Big[\sum_i c_i Z_{ni}(s) \sum_j c_j Z_{nj}(t)\Big]$$

$$= \sum \mathbb{E}c_i^2 \mathbb{E}[Z_{ni}(s) Z_{ni}(t)] \quad \text{by independence within rows.}$$

$$= \sum_i \mathbb{E}[Z_{ni}(s) Z_{ni}(t)] = \mathbb{E}[X_n(s) X_n(t)]$$