

# Lec. 25- left over exercises

Thursday, June 6, 2024

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Pages 30-40

13.)  $n \in \mathbb{Z}_{>0}$   $P_n =$  standard partition of  $[a, b]$

$f: [a, b] \rightarrow \mathbb{R}$  bounded

show that  $L(P_{2^n}; f) \leq L(P_{2^{n+1}}; f)$

$U(P_{2^{n+1}}; f) \leq U(P_n; f)$

14.) Show that  $\lim_{n \rightarrow \infty} L(P_{2^n}, f) = L(f)$

$\lim_{n \rightarrow \infty} U(P_{2^n}, f) = U(f)$

\* Do not assume  $f \in \mathcal{R}([a, b])$