Pr 11 oct

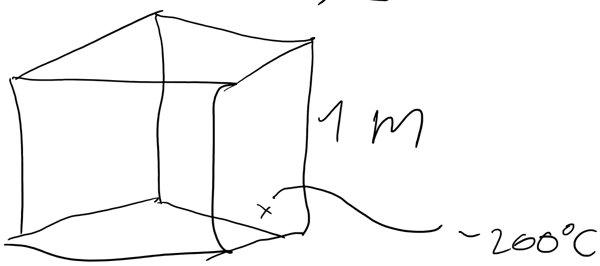
Friday, October 11, 2019 8:52 PM

$$A = \left(\bigcup f^{-1}((n,n+1])\right) \cup \underbrace{f^{-1}(\{+\infty\})}_{\mu(\text{—})=0}$$

$$\int_{f^{-1}((n,n+1])} f \, d\mu < \infty$$

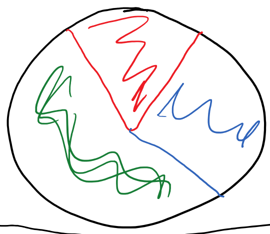
$$n\mu(f^{-1}((n,n+1])) \le \int_{f^{-1}((n,n+1])} f \, d\mu < \infty$$

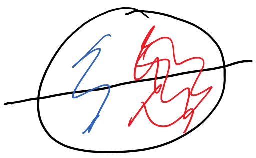
$$\mu(f^{-1}((n,n+1])) < \infty$$



$$t : C^3 \longrightarrow [-273{,}19, +\infty)$$

$$\int_{C^3} t \, d\mu$$





μ_1

μ_2

$$\mu_2(P_1) > 1/2$$

$$\mu_1(P_2) = 1/2, \mu_1(P_1) = 1/2$$

$$\int_{\boxed{f^{-1}((0,1])}} f \, d\mu < \infty$$

$$0 \cdot \mu(f^{-1}((0,1])) \le$$

$\mu(f^{-1}((1,+\infty])) < \infty$

$\cancel{\int_B f \, d\mu \geq 1 \, \mu(B) = \infty}$

$f^{-1}\left(\left(\frac{1}{n+1}, \frac{1}{n}\right]\right) \quad n = 1, 2, \ldots$

$\underbrace{\int_{f^{-1}\left(\left(\frac{1}{n+1}, \frac{1}{n}\right]\right)} f \, d\mu}_{\text{finito}} \geq \frac{1}{n+1} \mu\left(f^{-1}\left(\left(\frac{1}{n+1}, \frac{1}{n}\right]\right)\right)$

$\overline{A} = \overline{\{x \in X, f(x) \neq g(x)\}}$

$\int_A |f-g| \, d\mu > 0$

$\int_A f - g \, d\mu = 0 \qquad A^+$

$A^+ = \{x : f-g(x) > 0\}$

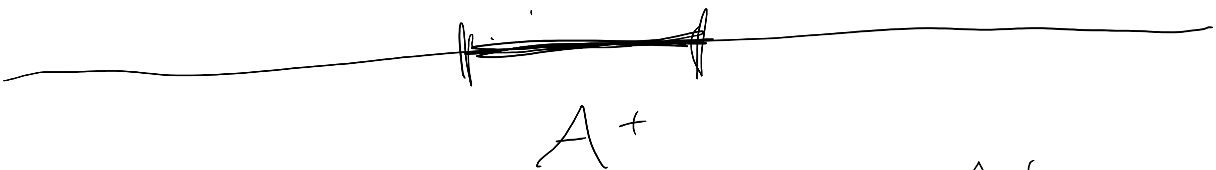
$A^- = \{x : f-g(x) < 0\}$

$\mu(A^+) > 0$

$\int_{A^+} f-g \, d\mu > 0$

$\mu(A^-) = \mu(A^+) = 0$

$\mu(A) = 0$, $\cancel{f = g \text{ ctp.}}$



$\mu(A^+) > 0$ $\quad A_n^+$

$A^+ = ($ [illegible] $n+1]$

$$A^+ = \bigcup_{n=0,1,\ldots} (f-g)^{-1}((n, n+1])$$

$$\mu(A_n^+) = 0 \quad \forall n$$

$$\mu(A^+) = 0$$

$$\mu(A_n^+) > 0$$

$$A = \{x : f-g(x) \neq 0\}$$

$$A = A^- \cup A^+$$

$$A^+ = \{x : f-g(x) > 0\}$$

$$\mu(A^+) > 0$$

$$A^+ = (f-g)^{-1}(1,+\infty] \cup (f-g)^{-1}\left(\tfrac{1}{2},1\right) \cup \left(\tfrac{1}{3},\tfrac{1}{2}\right) \cup \ldots (f-g)^{-1}\left(\tfrac{1}{n+1},\tfrac{1}{n}\right] \cup \ldots$$

A_n^+

Para algun $N \in \mathbb{N}$ $\qquad A_n^+$

$\mu(A_N^+) > 0$

$$\int_{A_N^+} f - g \, d\mu \geq \frac{1}{N+1} \mu(A_N^+)$$

$$\int_{A_N^+} f \, d\mu \neq \int g \, d\mu$$