

Re: commutes with translation

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On 30 Mar 2007 22:39:51 -0700, "Fedor" <malabar_carotte@xxxxxxxxxx> wrote:

hi all,

how can one prove that a linear bounded operator $T:L^1(\mathbb{R}) \rightarrow L^1(\mathbb{R})$ that commutes with translation is of the following form:
 $T(f)=f * \mu$
where μ is a measure (and $*$ is the convolution)?

As a start, show that $T(g*f) = g*T(f)$ for f, g in L^1 .

thanx,
Fedor

David C. Ullrich

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