End of great of Gorel func calc:

Recall: For x normal, fetococas), <forst, at = Socas Educia. We have to show froten is multiplicative: (foscas=forsgens. For hig cont., we know it by cont. tune. cole, so effective? Changers (A) 45, at the $Sfgd\mu_{t,\Lambda} = \langle fg\omega_{\lambda}t, \Lambda \rangle = \begin{cases} \langle f\omega_{\theta}g\omega_{\lambda}t, \Lambda \rangle = Sfd\mu_{\theta}\omega_{\lambda}t, \Lambda \end{cases} \quad \forall f,g \in C(G\omega_{\lambda}) \implies \begin{cases} gd\mu_{t,\Lambda} = d\mu_{\theta}\omega_{\lambda}t, \Lambda, \quad \omega_{\lambda} \\ gd\mu_{t,\Lambda} = d\mu_{\theta}\omega_{\lambda}t, \Lambda, \quad \omega_{\lambda} \end{cases}$ $Sfgd\mu_{t,\Lambda} = \langle f\omega_{\lambda}t, f\omega_{\lambda}t, \Lambda \rangle = Sfd\mu_{\theta}\omega_{\lambda}t, \Lambda \quad \forall f,g \in C(G\omega_{\lambda}) \implies \begin{cases} gd\mu_{t,\Lambda} = d\mu_{\theta}\omega_{\lambda}t, \Lambda, \quad \omega_{\lambda} \end{cases}$ so her are man those for his court on ecro. If we can extend 610 to all a laret, we will be done. To show gdmin=dygostin og Boreld is exim to Stydmin=Stdminstin Vtaccomos (=> coregions in) = cforsycons in). Indeed, <firegeration = (grash form) = Sadur, France = Saldur, a = Stadue, a = <ffgacration). So, we showed garein = dyngerstin &geticouss. Hunce, for f corety it follows Stadenin = Stadenin => colosionstin = < tongentin 45, act. Finally, (tydes=forsgerd. Done! Neumaurio Picommutant Theorem Thm: Let McDCHD be a unital, *-closed algebra. Then M is a U.M. algebra Cso Ms. ". and inly if M=M". CMore generally: if M is any unital +-alg. of OCHO; then Mar = M".) Examples: CID H= CZ, DCHD= M2(CD, M= {("D): c,dec]. M=M3.0., so we expect M=M". In fact, M=M' in this cise, so M"= CM's'= M-M. CODIE MCBCHO to any MARA Clike CO in BCCOD, then M'= M => M= M is a u.N. algo (3) M=4.I C BCH), M'= BCH), M"= BCH) = E.I. => M=M"L CHO H=6", OCHO = My CCO, M= {(A A): AEMZCEO). M is lim, dim, so it is so alosed. Let's wheels that indeed M=M". So, M"=(M')'= (M2CQI2D)'= {(A A) : ACM2CED} = M2CED@I.

Cemma: Cet ne BCHD, and let to be a Hilbert subspace of H. TFAE:
cis xCh3x bno xoch3x cis
CI2 XCUDEK BNB XCU-DEK-
ces without and x*chock
C3D xe=ex w e=e/ojho
- rea that we the offer
Such to is called a reducing subspace for xo The thin says that x: the xlar son x as a matrix bobs like (0 77) at 7=xlar, T=xlar, T=xlar.
TIM TO COME OF A PROPERTY AND A STATE AND
⊕ ⊕ (₹, • ¬)
The thin says that X: Kt Kt. So, X as a matrix bobs like (o 77) at 7=xlk, T==Nkt.
Royal of Itanina;
Assume coo: xezex. For lett, xetzex? (=> x(zex) ek => xsek => x(k)ch. For (6h1, xezex) => ozecx() => x11k => x16k1 => x16h2 ch1.
The state of the s
20" (32 00") 710-11-11" (32-0) (32), x6=6" = 6", = ", b = ", CH2 r L. 210-15-11"
as as which, whichi. went uplace theth. Since the hotel, it suffices to check for let and lette
NA - CAR
Fin teh, upsepal is true as week to perisonal, teht is similar; upsepal as aloht a perison
(20 => C30: xhck, x'hck. Wont: xeteent Viell, Cheh: fu. 16k, xteetsto tene has nicho. En ceht, xeteext? as onext as xilk
મુ. ક્ષ્ હક્
60 (x(,n)=0 Vnety 6> (1,x*n)=0 Vnety, 63 x*nety and lety-
Bicommuteur Thm: M=M11 CD M=M200.
400% is clear for any commutant to sic closed. Thinks xy:= 4x = 4x
"a" . We start with M=M"3", and must show Make", Make is always true.
To show that x6M" => x6M, we show x6M" => x6M" => x6M", so ony open abd at x cso. 3 intersects Me & Revew s.o. topology!