

Prove that $T_{\bar{\phi}\psi} - T_{\bar{\phi}}T_{\psi}$ is a compact operator if at least one of ϕ and ψ is the sum of a function in \tilde{H}^{∞} and a function continuous on S^1 . (Hint: In the continuous case, this can be established by approximating the continuous function by trigonometric polynomials and using the previous exercise. It can then be shown that adding a function in \tilde{H}^2 does not change $T_{\bar{\phi}\psi} - T_{\bar{\phi}}T_{\psi}$).