Week 7 (due November 19)

1. The function $\Delta_+(z, \mu^2)$ is a particular solution of the Klein-Gordon equation with mass μ defined as follows:

$$\Delta_+(z, \mu^2) = \int d^4p \; \theta(p^0)\delta(p^2 - \mu^2)e^{ipz}.$$

Show that this function is even for space-like z, but that for time-like z it is neither even nor odd.