# Applied Algebra HW 2

1. Use Euler's formula $e^{it} = \cos t + i \sin t$ to express $\sin 3t$ in terms of $\sin t$ and $\cos t$.
2. Use Euler's formula and the identity $e^{a+ib} = e^a e^{ib}$ to compute the integral $\int_0^\pi e^x \sin 3x dx$.