

1. Evaluate  $S_6$  to approximate  $\int_{-1}^1 e^{-x^2} dx$
2. How accurate is your value above?
3. For what value of  $n$  does  $S_n$  approximate  $\int_{-1}^1 e^{-x^2} dx$  to within 0.0001?
4. Repeat the three question above but with  $\int_0^{\pi} \sin x dx$
5. Answer questions #10,17,19,22 in section 7.7 of your text.