WK8 Tues.

BC 2nd sem

1994 BC5

Let f be the function given by $f(x) = e^{-2x^2}$

a) Write the first four nonzero terms and the general term for the power series expansion f(x) about
x=0

b) Find the interval of convergence of the power series for f(x) about x=0. Show your analysis.

c) Let g be the function given by the sum of the first four nonzero terms of the power series for f(x) about x=0. Show that $|f(x) - g(x)| < 0.02$

for $-0.6 \le x \le 0.6$