1. **What derivative is approximated in the above formula?**
2. **What is the leading order *truncation error* ?**
3. **What is the estimated *round-off error* as a function of h? (Assume condition number is roughly 1).**

Rounded number:

Let:

Thus,

Last term is bounded by,

Therefore,

1. **For what h is the minimal total error attained?**

1. **What is the estimated** **minimal *total error* (for IEEE 64-bit arithmetic) ?**

Plug into