1. **What is the approximate condition number for evaluating function $f(x)=e^x$?**

   condtion number $= \left|\dfrac{xf'(x)}{f(x)}\right| = \left|\dfrac{xe^x}{e^x}\right| = |x|$

2. **How large is $f(x)$ when the approximate condition number is 10^8?**

   condition number$=|x|=10^8$

   x=10^8 or -10^8

   $f(x) = e^{10^8}$, $overflow$ or $f(x) = e^{-10^8}$