HW 2 PROBLEMS

From Rudin Chapter 5 solve: 11,12,14,15,16. If interested work on 25 as well, although this is optional.

Also solve the following problems:

Problem 1. Assume that you know the derivatives of $\sin x$ and $\cos x$. Using Taylor's theorem prove that for all $x \in [0, \frac{\pi}{2}]$ the following holds true:

$$1 - \frac{x^2}{2!} \leq \cos x \leq 1 - \frac{x^2}{2!} + \frac{x^4}{4!}$$

From Rudin Chapter 6 solve: 1,4.