Review for Exam 1: Wednesday February 4

1. Odd and even functions

   - Be able to determine if a function $f(x)$ is odd: Using $f(-x) = -f(x)$.
   - Be able to determine if a function $f(x)$ is even: Using $f(-x) = f(x)$.
   - Be able to determine if a function is neither odd nor even.

   Check Exercise 1.2.5 and Homework 1.

2. Fourier - cosine series and application

   - Be able to find the Fourier cosine series of $f(x)$ on the interval $0 < x < \pi$.
   - Be able to apply the Fourier-cosine series that you obtained by putting $x = 0$ or $x = \pi$ whichever works.

   Check Question 7 of Homework 1.

3. Fourier series, application and Parseval identity.

   - Be able to find the Fourier series of $f(x)$ on the interval $-\pi < x < \pi$.
   - Be able to apply the Fourier series that you obtained by putting $x = 0$ or $x = \pi$ whichever works.
   - Be able to use Parseval's identity using the Fourier series that you obtained.

   Check Question 1 of Homework 2.

4. Homework: Review Homework 1 and Homework 2.