Introduction to Scientific Computing Software HW1
Student ID : < **Student ID** >

Please use MuPAD to solve following problems :

1. $\displaystyle\sum_{k=1}^{\infty} \frac{(-1)^{k+2}}{k^2}$

2. Plot $f(x) = \sin x + \dfrac{\sin 3x}{3} + \dfrac{\sin 5x}{5} + \dfrac{\sin 7x}{7} + \dfrac{\sin 9x}{9}, x \in [-2\pi, 2\pi]$

3. Differentiate the function. $f(x) = x^x$

4. Calculate $31^{< \mathbf{ID} >} \pmod{17}$