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

Please use MuPAD to solve following problems :

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

2. Plot $f(x) = \dfrac{2}{\pi}\left(-\sin 2\pi x + \dfrac{\sin 4\pi x}{2} - \dfrac{\sin 6\pi x}{3}\right), x \in [-\pi, \pi]$

3. $\displaystyle\int x \ln x \, dx$

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