

King Fahd University of Petroleum & Minerals  
Department of Mathematics and Statistics  
(Semester 132) Math 301.2 Quiz # 4

Name: \_\_\_\_\_ I.D. # \_\_\_\_\_ Sr. # \_\_\_\_\_

a) Find the Fourier series of  $f(x) = \begin{cases} -1 & -\pi < x < 0 \\ 2 & 0 \leq x < \pi \end{cases}$ .

b) Based on your answer in part (a), evaluate  $\sum_{n=0}^{\infty} \frac{(-1)^n}{2n+1}$ .