

**MATH 385-X1 - DIFFERENTIAL  
EQUATIONS: QUIZ 4**

(2)  $f(t) = t, -2 < t < 2.$

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Name : \_\_\_\_\_

The values of a periodic function  $f(t)$  in one full period are given; at each discontinuity the value of  $f(t)$  is that given by the average of left- and right-limits. Sketch the graph of  $f$  and find its Fourier series. [5 pts each]

$$(1) f(t) = \begin{cases} 0, & -\pi < t < 0, \\ 1, & 0 < t < \pi. \end{cases}$$