

# **Math 240 - Quiz 12**

December 7, 2023

Name \_\_\_\_\_

Score \_\_\_\_\_

Show all work to receive full credit. Supply explanations when necessary.

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1. (10 points) Let  $f(x)$  be the periodic extension (with period 2) of its portion defined on  $[-1, 1]$  by  $f(x) = |x|$ .

(a) Roughly sketch the graph of 3 or 4 periods of  $f$ .

(b) Determine the Fourier series for  $f$ .