

# Math 330 Reading Questions

Section 3.2, part 2

NAME \_\_\_\_\_

Read pages 79–91 from Section 3.2 in the textbook and answer the following questions. This sheet will be collected at the beginning of class on Tuesday. Your responses will be graded for completeness.

1. What is the definition of a *piecewise continuous* function on an interval  $[a, b]$ ?
  
  
  
  
  
  
  
  
  
  
2. In addition to being piecewise continuous, what is required for a function to be *piecewise  $C^1$*  on an interval  $[a, b]$ ?
  
  
  
  
  
  
  
  
  
  
3. For what functions  $\tilde{f}(x)$  does the Fourier series for  $\tilde{f}(x)$  converge to  $\tilde{f}(x)$ ?
  
  
  
  
  
  
  
  
  
  
4. If  $f(x)$  is an odd function and  $f(x)$  is integrable on  $[-a, a]$ , then what is the value of  $\int_{-a}^a f(x) dx$ ?
  
  
  
  
  
  
  
  
  
  
5. What is a *Fourier cosine series*?
  
  
  
  
  
  
  
  
  
  
6. What is a *complex Fourier series*?