

# Math 234 Preview Exercises

Big O Notation

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Read the chapter on Big-O notation (on Moodle) and answer the following questions. *Hand in this worksheet at the next class.*

1. What does it mean if two functions  $f$  and  $g$  are **asymptotically similar**? What notation is used for this?
2. What does it mean if a function  $f$  is **asymptotically smaller** than a function  $g$ ? What notation is used for this?
3. How is the “dominant term” of a function used to assess asymptotic relationships?
4. What does it mean if  $f(n)$  is  $O(g(n))$ ?
5. What are some examples that the text gives of functions that are  $O(n^2)$ ?