

EECS 454  
Analysis of Algorithms  
2006 Spring Semester

# Homework 1

Due at the beginning of class, January 27, 2006  
No late papers accepted

1. Prove by induction on  $n$  that  $n$  is divisible by 3 if and only if the sum of its digits in its base 10 representation is divisible by 3.
2. Solve the following exercises in CLRS:
  - a. 3.1-4 (page 50)
  - b. 4.3-1 (page 75)
  - c. C.2-2 (page 1105)
  - d. C.3-8 (page 1111)
  - e. C.3-9 (page 1111)
  - f. C.4-5 (page 1117)