

**MAE 301/501 HOMEWORK-1 DUE IN-CLASS, AT THE BEGINNING OF CLASS, ON
MONDAY, JANUARY 30.**

One goal for this course is for you to develop your skill in effectively communicating mathematics. With this in mind, you should clearly write up your solutions. Solutions with little or no justification will receive little or no credit.

- (1) Carefully read section 2.1: *The Real Numbers*.
- (2) From 2.1.1 do problems 1, 8.
- (3) From 2.1.2 do problems 2, 6.
- (4) From 2.1.4, do problems 1 and 5
- (5) Explain (write) the nested interval argument on page 31 that $1 = .\bar{9}$. Use a diagram if it helps.