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## Quiz Set 5

### For Quiz on Friday, November 7

Work all of the following exercises. A subset of these exercises and definitions from Sections 5.1 and 5.2 will be on Quiz 5 to be given November 7. Quizzes will be graded for correctness and clarity. All exercises are from the textbook *Proofs and Fundamentals* (Second Edition) by Ethan D. Bloch.

- Exercise 5.2.2 (1) and (5)
- Exercise 5.2.3
- Exercise 5.2.4
- Exercise 5.2.6
- Exercise 5.2.7
- Exercise 5.2.8
- Exercise 5.2.12

*Notes for Exercise 5.2.12:*

- There is a typo in this exercise:  $x$  should be  $x = \sum_{i=1}^m a_i 10^{i-1}$ .
- A consequence of this exercise is that  $x$  is divisible by 9 if and only if the sum of the digits of  $x$  is divisible by 9.