Assignment #3

Due Wednesday, 18 September 2019, at the start of class

The problems below are all from Chapter 3 of the textbook.[1] I expect you to be able to handle all of the significant ideas in Chapter 3.

Please also read Chapters 4,5,6 on the topology of metric spaces. I will cover this topology material in class, and on Assignment #4 in particular, but it is not as central to our real analysis goals as is Chapter 3. I will not treat this material quite as thoroughly.

One exercise below is identified with your initials. Please LaTeX this problem and send both the `.tex` and `.pdf` to me at `elbueler@alaska.edu` by the same due date as above. See the course website for a LaTeX template.

DO THE FOLLOWING EXERCISES from the textbook:

<u>CHAPTER 3</u>

- Exercise #19 on page 42.   ⟵ **AM**
- Exercise #24 on page 44.   ⟵ **DD**   (*State and prove a proposition as your answer.*)
- Exercise #25 on page 44.
- Exercise #32 on page 46.
- Exercise #34 on page 46.
- Exercise #37 on page 47.   ⟵ **WV**
- Exercise #41 on page 48.
- Exercise #44 on page 48.

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[1]Carothers, *Real Analysis*, Cambridge University Press 2000.