Assignment #7

Due Friday, 3 April 2020, at 5pm. Send electronically.

Please read Chapter 11 on Banach spaces. It is harder material which deserves an entire class. We will treat it lightly because my priority is to understand operators on Hilbert spaces. In any case, this Assignment is short.

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 due date.

DO THE FOLLOWING EXERCISES from the textbook (Muscat, *Functional Analysis*, 2014):

- #1 in Exercises 11.15, page 231.   *Remember that Proposition 8.23 characterizes totally-bounded sets.*   ⟵ **DD**
- #2 in Exercises 11.15, page 231.   *Just assume that the space is ℓ^1.*   ⟵ **OS**
- #5 in Exercises 11.15, page 231.   ⟵ **WV**
- #2 in Exercises 11.26, page 239.   *Apply the Hahn-Banach theorem.*
- #1 in Exercises 11.32, page 245.
- #3 in Exercises 11.32, page 245.