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1. *Homeworks.* At this instant I have graded all homeworks that arrived by about 1700, 10 April. Counting just the completed assignments, some one point and some two, the class distribution is
 - a. 19–26 points ****
 - b. 9–18 points ***
 - c. – 8 points **
 2. *In class, the Cardinals II unit*
 - a. I discussed the proof of the comparability theorem.
 - i. If you restrict the statement and proof to the case $I = \{0, 1\}$ you get the trichotomy theorem. You can simplify the notation and language a little, and that might help you understand the proof better.
 - ii. I think Hönig's proof is just plain elegant. It's one of my favorites. I don't know much about him except that he seems to be Brazilian, wrote mainly on analysis, and wrote only paper in foundations. I suspect he worked under the influence of Leopoldo Nachbin, a Brazilian functional analyst who did much to modernize mathematics in his country during the 1950s.
 - b. This is a typical application of the maximal principle. Since it takes so long to present proofs of that sort, I've decided not to give those of $\alpha + \alpha = \alpha$ and $\alpha\alpha = \alpha$ for infinite cardinals α in class. They are adequately discussed in *Cardinals II*.
 - c. Although the proof of $\alpha\alpha = \alpha$ has the same structure, it's more involved, mainly because you encounter the same difference-of-products situation that you probably first met in the proof of the product rule for differentiation. As a result, this proof must use several lemmas that state weaker results. It would be nice to avoid that, but I don't know how.