This is an optional practice problem for you to work. Answers will be posted on the web. If you desire some extra credit this term, you may hand in up to 5 of these for a total of 10 extra credit points added to your weekly problem set score. To receive extra credit, these must be handed in by the next class period.

Look at the entry on Hilbert space at MathWorld (http://mathworld.wolfram.com/HilbertSpace.html) and explain why Hilbert space is of interest to quantum mechanics.

The Culture of Chemistry

Die Fakultät ist keine Badeanstalt.
The faculty is not a pool changing room.
[On the proposed appointment of the first woman professor - Emmy Noether.]
David Hilbert
Quoted in A L Mackay, Dictionary of Scientific Quotations (London 1994)