Notes on 0-F

For vector spaces, we didn't prove the additional consequences that can be proved from the basic laws that define vector spaces. See the text for some of those. [Later: on 1-M we did prove some similar consequences in the case of fields.]

Because of the associative law for vector addition, if we write the sum of three vectors as $v + w + u$, that's not ambiguous. In class I gave examples of other operations (not on vector spaces) that are not associative, such as division for nonzero real numbers: "4/2/2" *is* ambiguous. Each computer compiler will have some assumption about how to interpret such a case, either $(4/2)/2$ or $4/(2/2)$.