

Week 24 (2/24/03)

**Verifying weights**

- (a) You have a balance scale and wish to verify the weights of items that come in weights from 1 to 121 (all integral). What is the minimum number of fixed weights you need? What are the weights?
- (b) Using  $n$  wisely-chosen fixed weights, what is the largest integer  $W$ , for which you can verify all the integral weights less than or equal to  $W$ ? What fixed weights should you choose?