

1135-VV-602 **Ethan D Bolker*** (ebolker@gmail.com), **Samuel A Feuer** and **Catalin Zara**. *Balance weighing - variations on a theme.*

Let w_k be an increasing sequence of integer weights. We explore weighing problems when you may use at most one of each kind, but may put some on either side of the balance. The solutions depend on analyzing how arithmetic works when you expand numbers in the mixed base defined by the weights. Much of the material is suitable for elementary school exercises in various grades. (Received September 21, 2017)