

## Homework 2 - Due 2/20/2013

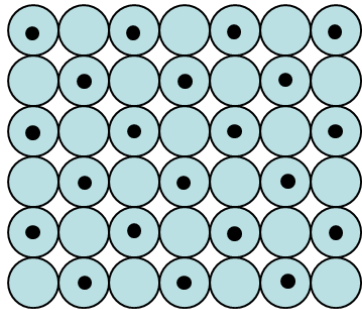
John Kitchen

2013-02-13 Mon

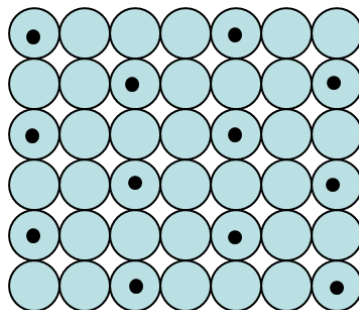
### 1 Calculate the number of atoms/cm<sup>2</sup> in the following surfaces:

- a) FCC(100) Cu, Pt
- b) FCC(111) Cu, Pt
- c) BCC(100) Mo, W
- d) BCC(110) Mo, W

### 2 In the following image the large blue circles are the surface metal atoms and the small black circles represent adsorbates.



A.



B.

- a) Give an example of what surface the large circles could represent.
- b) Describe the overlayer in each case using matrix notation. If possible, also express the overlayer using Wood's notation.
- c) Calculate the reciprocal lattice vectors for each case.
- d) Sketch the LEED pattern you expect for these two surfaces.