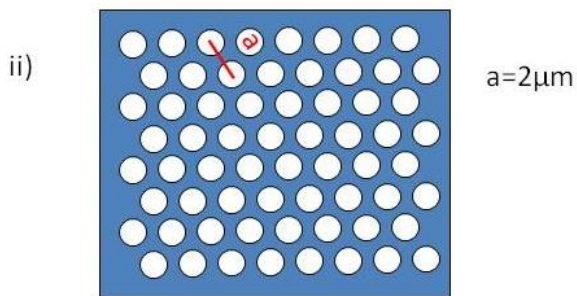
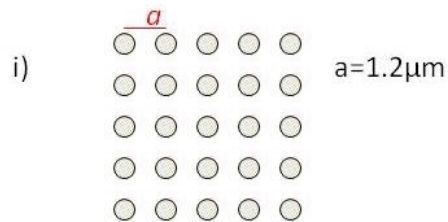


Homework 2

1) Calculate the reciprocal lattice vectors for the following crystals. Sketch the reciprocal crystal and the irreducible Brillouin Zone.



2) Complete the MIT Photonic Bandgap User Tutorial section 'Our first band structure'. Turn in the ctf file used, a log of the output, a band diagram showing the bandgaps, and a picture of the E_z field at the 2nd k point, in the first band.

3) Find a peer reviewed journal paper that discusses surface states on 1D crystals. Read the paper and write a 1 page summary of the paper. Be prepared to discuss your paper in class. (Note, 1D crystals are also known as Bragg Stacks or Bragg Mirrors)