

# PHY2009: Answers to problems: Lectures 7 to 12

## Lectures 7 and 8

- 1) (a)
- (b)
- (c) HINT: you should find that  $\mathbf{a}^*$  is perpendicular to  $\mathbf{b}$  and  $\mathbf{b}^*$  is perpendicular to  $\mathbf{a}$ . Also if  $|\mathbf{a}| > |\mathbf{b}|$  then  $|\mathbf{a}^*| < |\mathbf{b}^*|$ , and vice versa.
- (d)
- (e) The first BZ is a rectangle; the first and second together form a shape like an unfolded envelope.