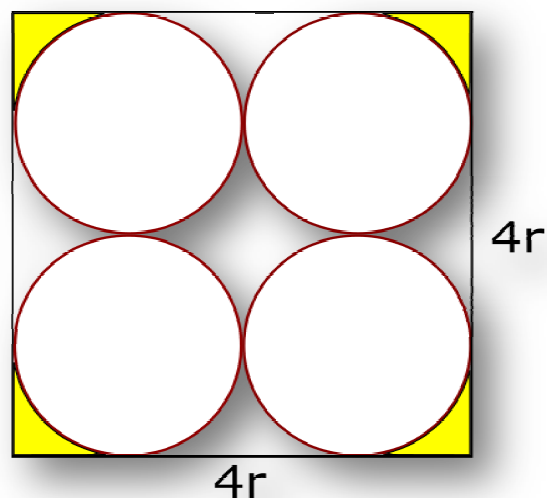


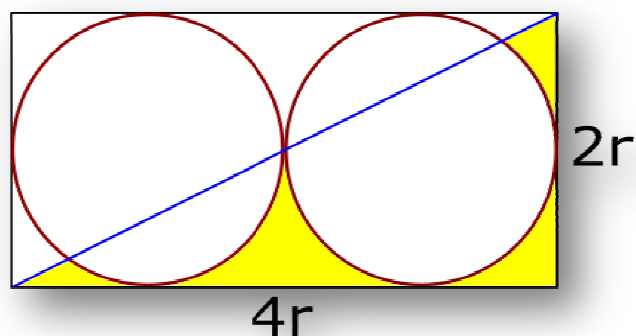
## Mooncakes



- (a) A square box of side  $d$  contains 4 moon-cakes each of radius  $r$  is shown in the right diagram.  
Find the area shaded in yellow in terms of  $d$  .



- (b) (i) A rectangular moon-cake box contains two moon-cakes, each of radius  $r$ .  
A diagonal is drawn as shown in the right.  
Find the total area of the parts shaded yellow in terms of  $r$ .



- (ii) Find the total area of the parts shaded yellow in terms of  $r$ .  
(Note that a small piece of area in yellow in the lower left corner is removed)

