Pop Quiz (Week 6) [10 mins] – 10 pts

Name:_____Student ID: _____

Please show your work for partial credits.

1) **[1]** The efficiency of Sutherland-Hodgeman polygon clipping method stems from
   a) Pipelining
   b) Integer computations
   c) Logic computations
2) **[1]** The efficiency of Liang-Barsky line clipping method of clipping stems from
   a) Pipelining
   b) Integer computations
   c) Logic computations
3) **[1]**The efficiency of the Cohen-Sutherland line clipping method steps from
   a) Pipelining
   b) Integer computations
   c) Logic computations
4) **[2+3+2 = 7]** Consider a diamond in 2D space given by the four coordinates (1,0), (0, 1), (-1, 0) and (0,-1).
   a) Give the four coordinates of the axis aligned bounding box for this diamond.

   b) Consider a rotation of this diamond by 45 degrees in the anticlockwise direction. What are the new bounding box vertices?

   c) **Instead of a rotation,** consider a translation of the diamond by (1,1). What are the new bounding box vertices in this case?