public static bool my\_judge\_across(my\_bridge b1, my\_bridge b2)

{

double delt1, delt2, delt3, delt4;

delt1 = (b2.p1.x - b1.p1.x) \* (b2.p2.y - b1.p1.y) - (b2.p1.y - b1.p1.y) \* (b2.p2.x - b1.p1.x);

delt2 = (b2.p1.x - b1.p2.x) \* (b2.p2.y - b1.p2.y) - (b2.p1.y - b1.p2.y) \* (b2.p2.x - b1.p2.x);

delt3 = (b1.p1.x - b2.p1.x) \* (b1.p2.y - b2.p1.y) - (b1.p1.y - b2.p1.y) \* (b1.p2.x - b2.p1.x);

delt4 = (b1.p1.x - b2.p2.x) \* (b1.p2.y - b2.p2.y) - (b1.p1.y - b2.p2.y) \* (b1.p2.x - b2.p2.x);

if ((delt1 > 0 && delt2 < 0) || (delt1 < 0 && delt2 > 0) && (delt3 > 0 && delt4 < 0) || (delt3 < 0 && delt4 > 0))

return true;

else if (delt1 == 0 && is\_OnSegment(b1.p1, b2.p1, b2.p2))

return true;

else if (delt2 == 0 && is\_OnSegment(b1.p2, b2.p1, b2.p2))

return true;

else if (delt3 == 0 && is\_OnSegment(b1.p1, b2.p1, b2.p2))

return true;

else if (delt4 == 0 && is\_OnSegment(b1.p2, b2.p1, b2.p2))

return true;

return false;

}