2) A current I flows along a wire that makes a right angle bend, as shown in the figure. If this right angle bend lies at the origin and the wire carrying the incoming current lies on the negative y-axis (and extends to large negative distances), then the part of the wire carrying the outgoing current lies on the positive x axis (and extends to large positive distances). Use the law of Biot and savart to find the magnetic field at the point P (a,-a)in the x-y plane. Then find the magnetic field at the point Q whose coordinates are (2a, -a).

 Y

 I X

 **.** P  **.** Q (2a, -a)

 (a, -a)

 I