



Input

$L0$  .....  
 $L0 (p0(x,y), p1(x,y), true, true)$

Output

$L0$  .....  
 $L1$  .....  
 $L2$  .....  
 $L0 (p0(x,y), crossPoint1, true, false)$   
 $L1 (crossPoint1, crossPoint2, false, false)$   
 $L2 (crossPoint2, p1(x,y), false, true)$