

$$xc(1) = \left( \frac{-\left( abs(x1-x2)*(y1-y2)*\sqrt{(x1^2-2*x1*x2+x2^2+y1^2-2*y1*y2+y2^2)*(4*r^2-x1^2+2*x1*x2-x2^2-y1^2+2*y1*y2-y2^2)} - (x1^2-x2^2)*(x1^2-2*x1*x2+x2^2+y1^2-2*y1*y2+y2^2) \right)}{2*(x1-x2)*(x1^2-2*x1*x2+x2^2+y1^2-2*y1*y2+y2^2)} \right)$$

$$yc(1) = \left( \frac{abs(x1-x2)*\sqrt{(x1^2-2*x1*x2+x2^2+y1^2-2*y1*y2+y2^2)*(4*r^2-x1^2+2*x1*x2-x2^2-y1^2+2*y1*y2-y2^2)} + (x1^2-2*x1*x2+x2^2+y1^2-2*y1*y2+y2^2)*(y1+y2)}{2*(x1^2-2*x1*x2+x2^2+y1^2-2*y1*y2+y2^2)} \right)$$

$$xc(2) = \left( \frac{abs(x1-x2)*(y1-y2)*\sqrt{(x1^2-2*x1*x2+x2^2+y1^2-2*y1*y2+y2^2)*(4*r^2-x1^2+2*x1*x2-x2^2-y1^2+2*y1*y2-y2^2)} + (x1^2-x2^2)*(x1^2-2*x1*x2+x2^2+y1^2-2*y1*y2+y2^2)}{2*(x1-x2)*(x1^2-2*x1*x2+x2^2+y1^2-2*y1*y2+y2^2)} \right)$$

$$yc(2) = \left( \frac{-\left( abs(x1-x2)*\sqrt{(x1^2-2*x1*x2+x2^2+y1^2-2*y1*y2+y2^2)*(4*r^2-x1^2+2*x1*x2-x2^2-y1^2+2*y1*y2-y2^2)} - (x1^2-2*x1*x2+x2^2+y1^2-2*y1*y2+y2^2)*(y1+y2) \right)}{2*(x1^2-2*x1*x2+x2^2+y1^2-2*y1*y2+y2^2)} \right)$$

With x1, y1 start point coordinates

With x2, y2 end point coordinates

With xc, yc searched center point coordinates (in general 2 solutions)