$$y = -\frac{1}{3}x + b$$

$$(mx, my)$$

$$\Rightarrow \quad b = my + \frac{1}{3}mx$$

$$\Rightarrow y = -\frac{1}{3}x + c$$

Compute midpoint (P_1, P_2)
Compute bisector $y = ax + b$
Compute midpoint (P_3, P_4)
Compute bisector $\tilde{y} = \tilde{a}x + \tilde{b}$
$\quad x = 0$
$\quad \varepsilon = 0.01$
distance $= abs((a - \tilde{a})x + (b - \tilde{b}))$

While True

For x in $[0 : 0.1 : diameter]$:
$\quad$ distance $= abs((a - \tilde{a})x + (b - \tilde{b}))$
$\quad\quad$ if distance $\leq \varepsilon$
$\quad\quad\quad$ Return $(x, ax + b)$

$$c = 2\pi r$$
$$\Rightarrow r = \frac{c}{2\pi}$$
$$\Rightarrow d = 2 \cdot r$$

$$y = ax + b$$
$$\tilde{y} = \tilde{a}x + \tilde{b}$$

$$d = (y - \tilde{y}) = (a - \tilde{a})x + (b - \tilde{b})$$