

Algorithm 1: Find k sensors that $(k - \omega)$ covers point P

Input: A point P and a set G consisting of n sensors that cover P .

Output: k sensors that $(k - \omega)$ covers P .
There is possibility that no output is found.

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1 Let  $L$  store the output
2 Sort  $G$  in counter-clockwise order around  $P$ 
3  $\text{found} \leftarrow \text{false}$ 
4 while  $!\text{found} \ \&\& \ G.\text{size} \geq k \ \&\&$   
    $(\overrightarrow{PS_n}, \overrightarrow{PS_1}) \leq 2\pi - (k - 1)\omega$  do
5   |  $k\text{List}[1] \leftarrow G[1]$ 
6   |  $\text{found} \leftarrow \text{RecursiveFinding}(2,1)$ 
7   | if  $\text{found} == \text{true}$  then
8   | | return  $L$ 
9   | remove  $G[1]$  from  $G$ 
10 end while
```
