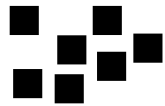
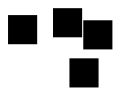
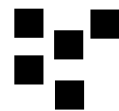
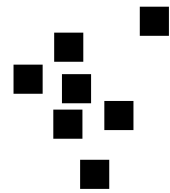
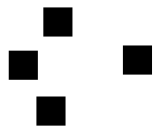
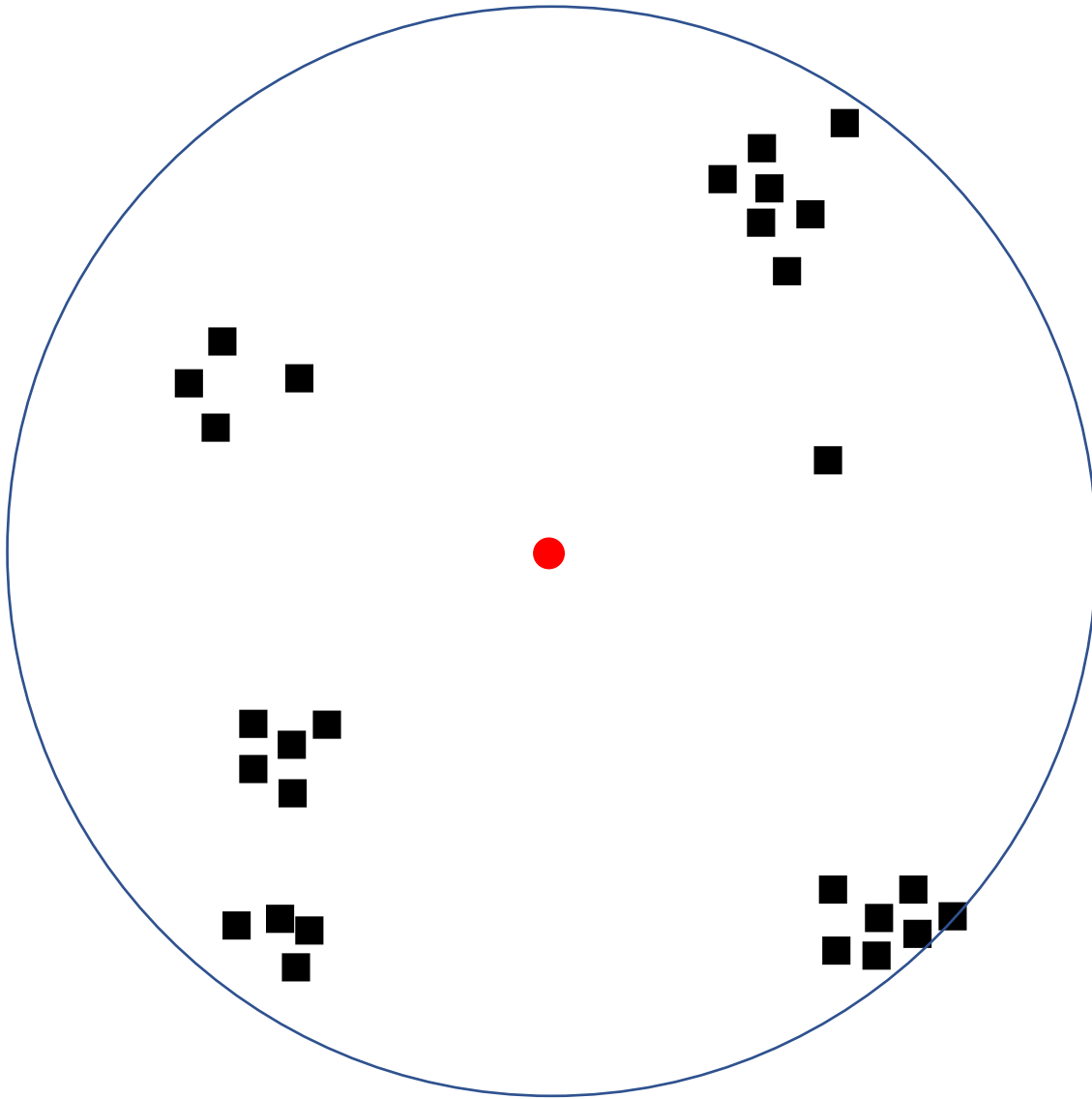
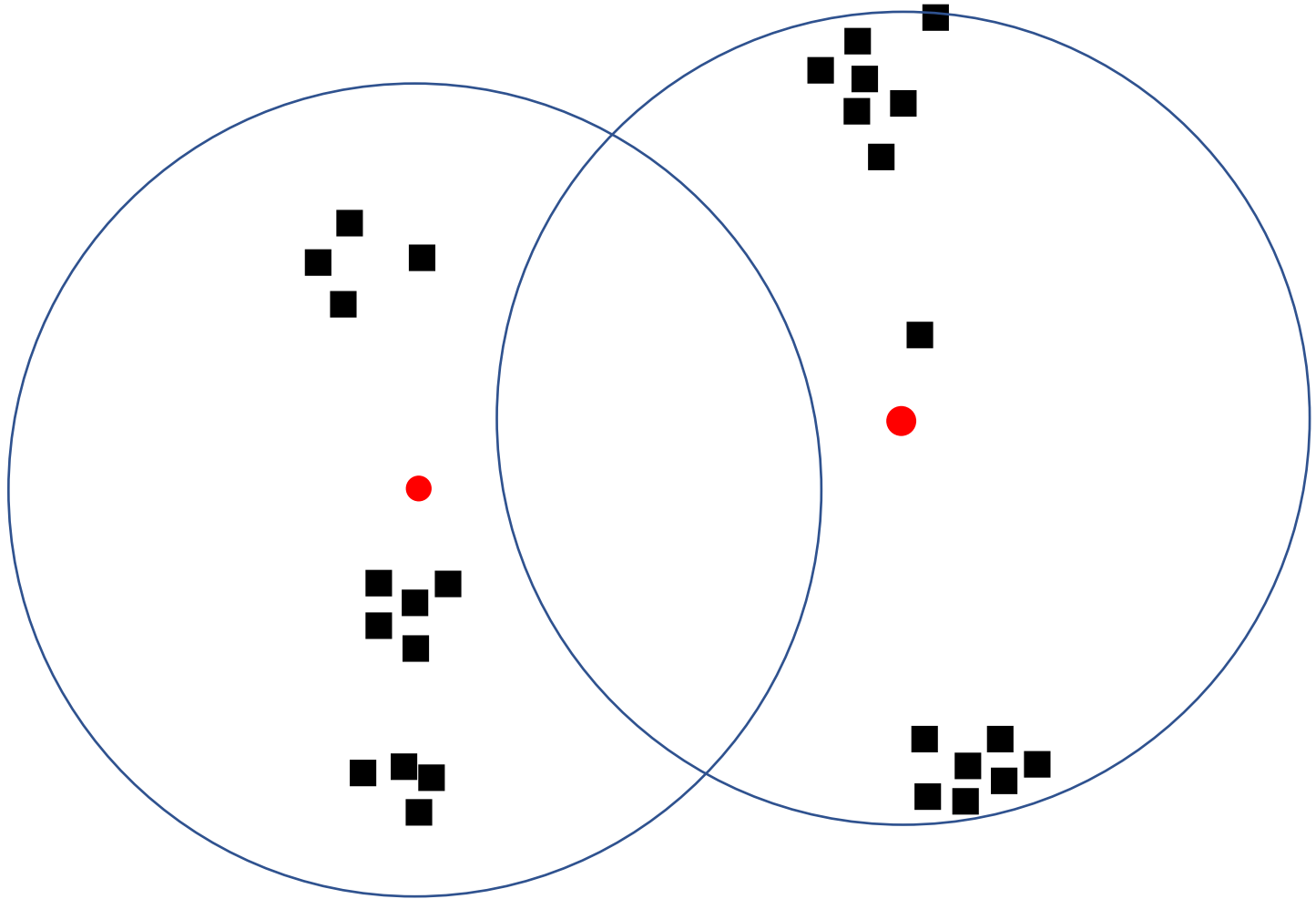


# The $k$ -centre problem

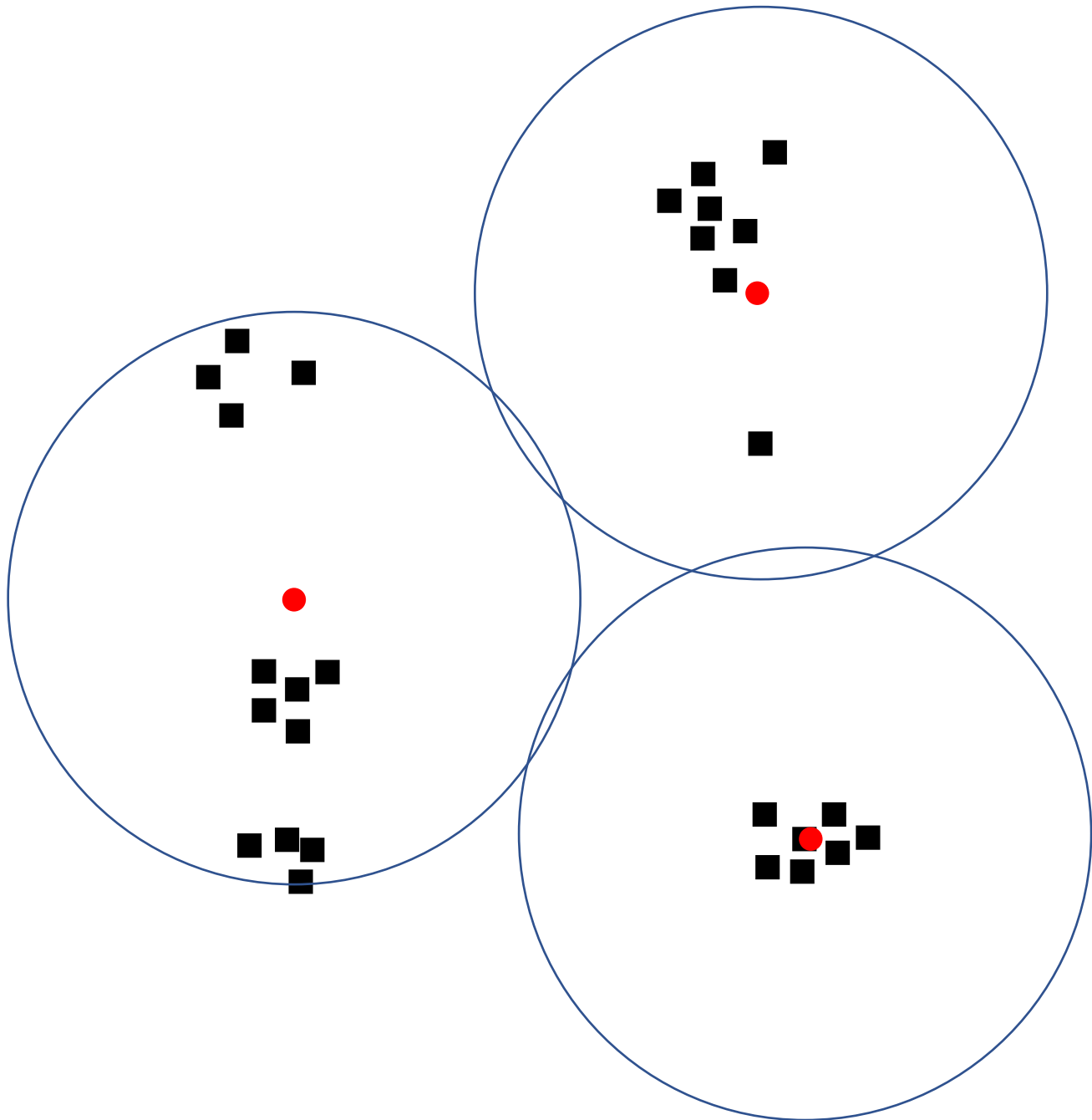




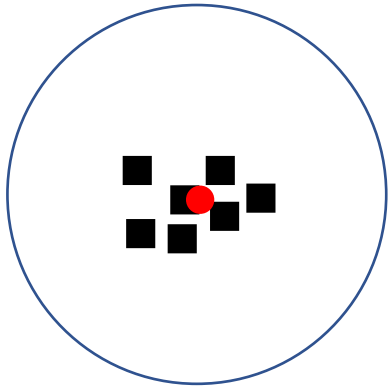
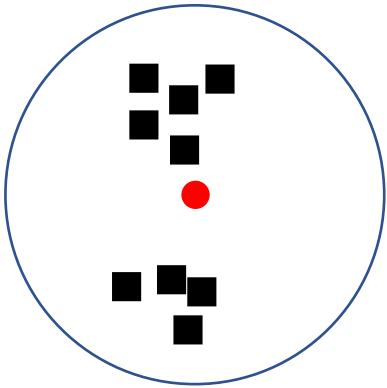
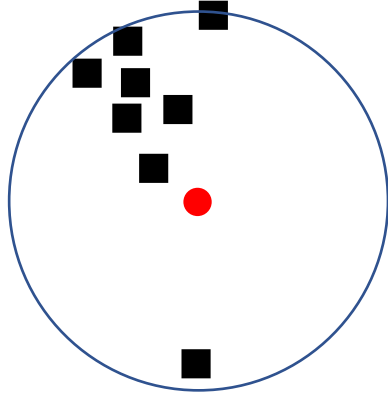
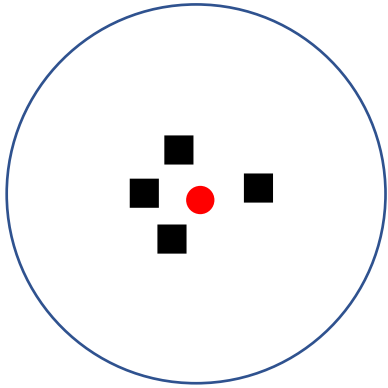
$k = 1$



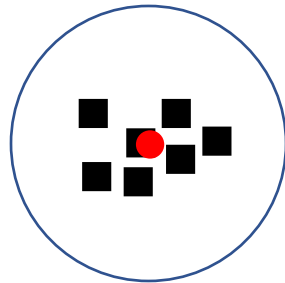
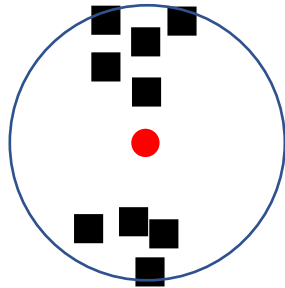
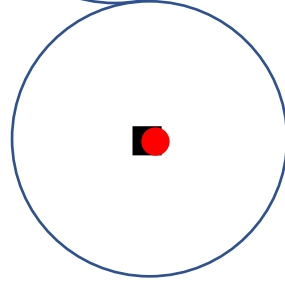
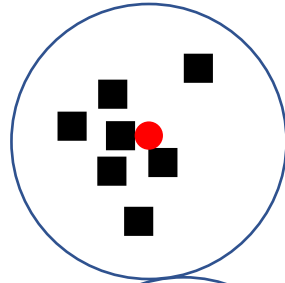
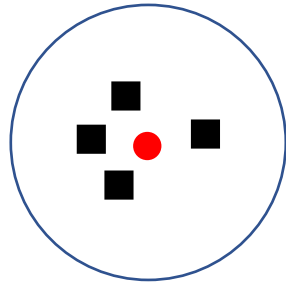
$k = 2$



$k = 3$



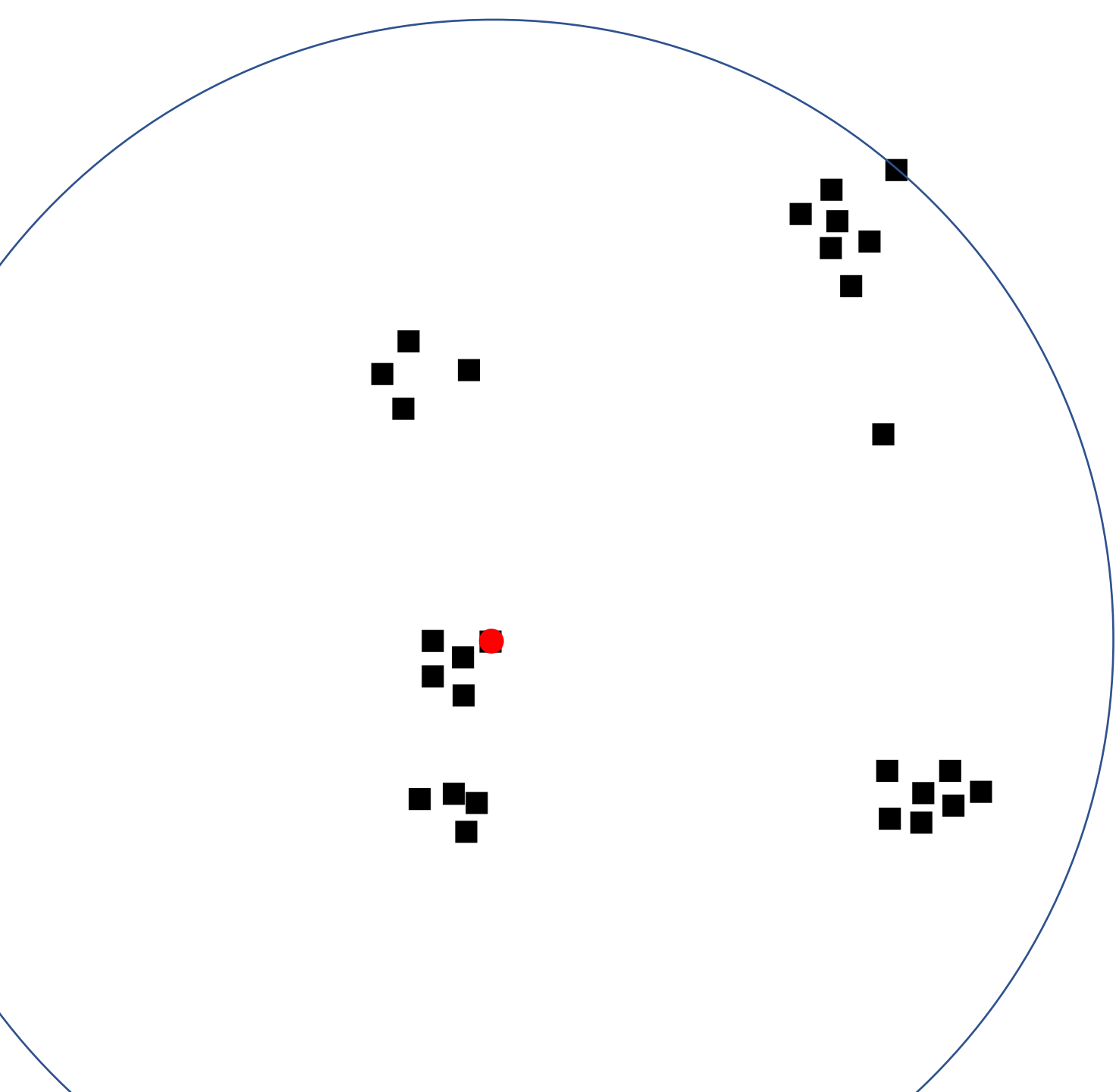
$k = 4$



$k = 5$

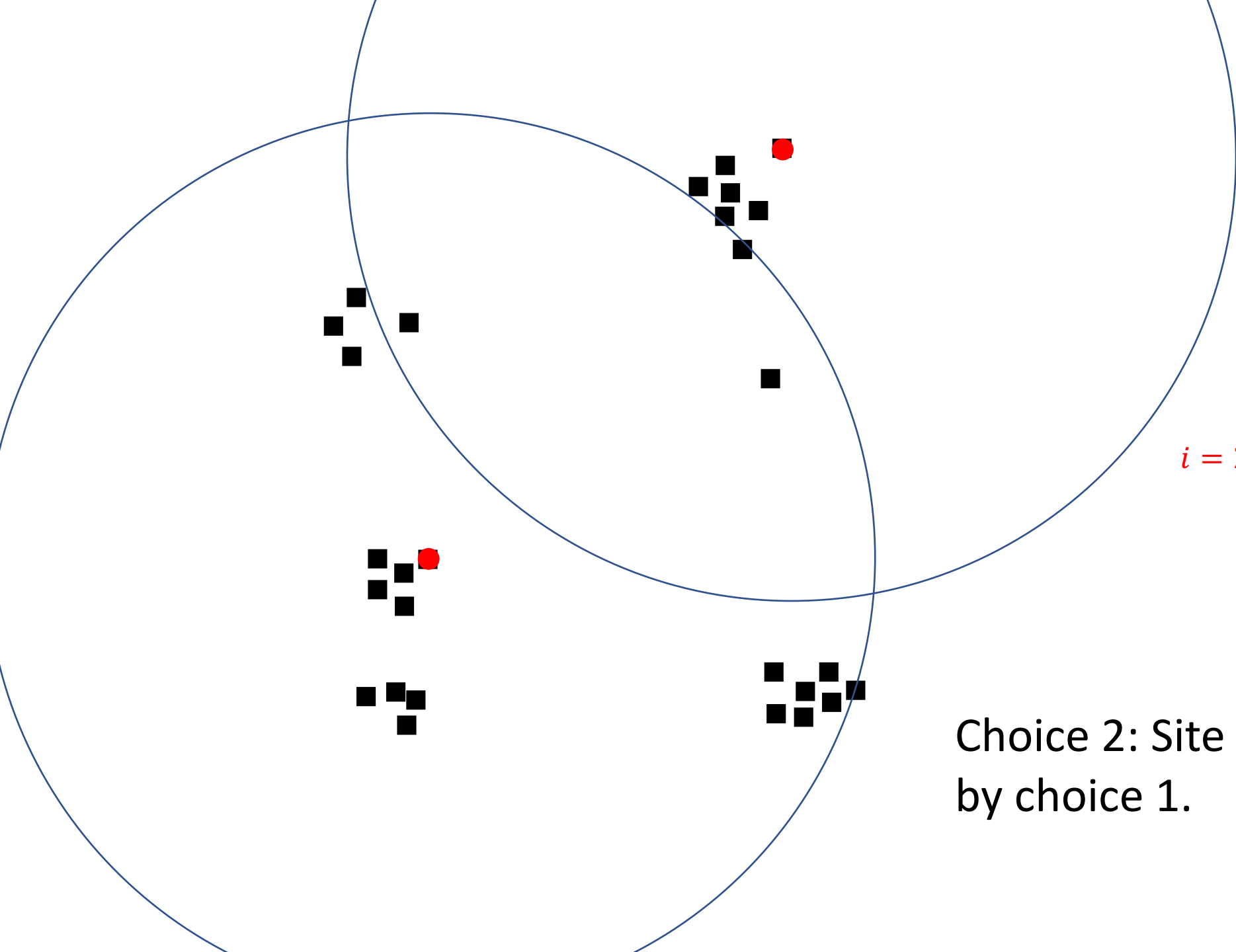
# Approximation greedy algorithm $k$ -centre problem





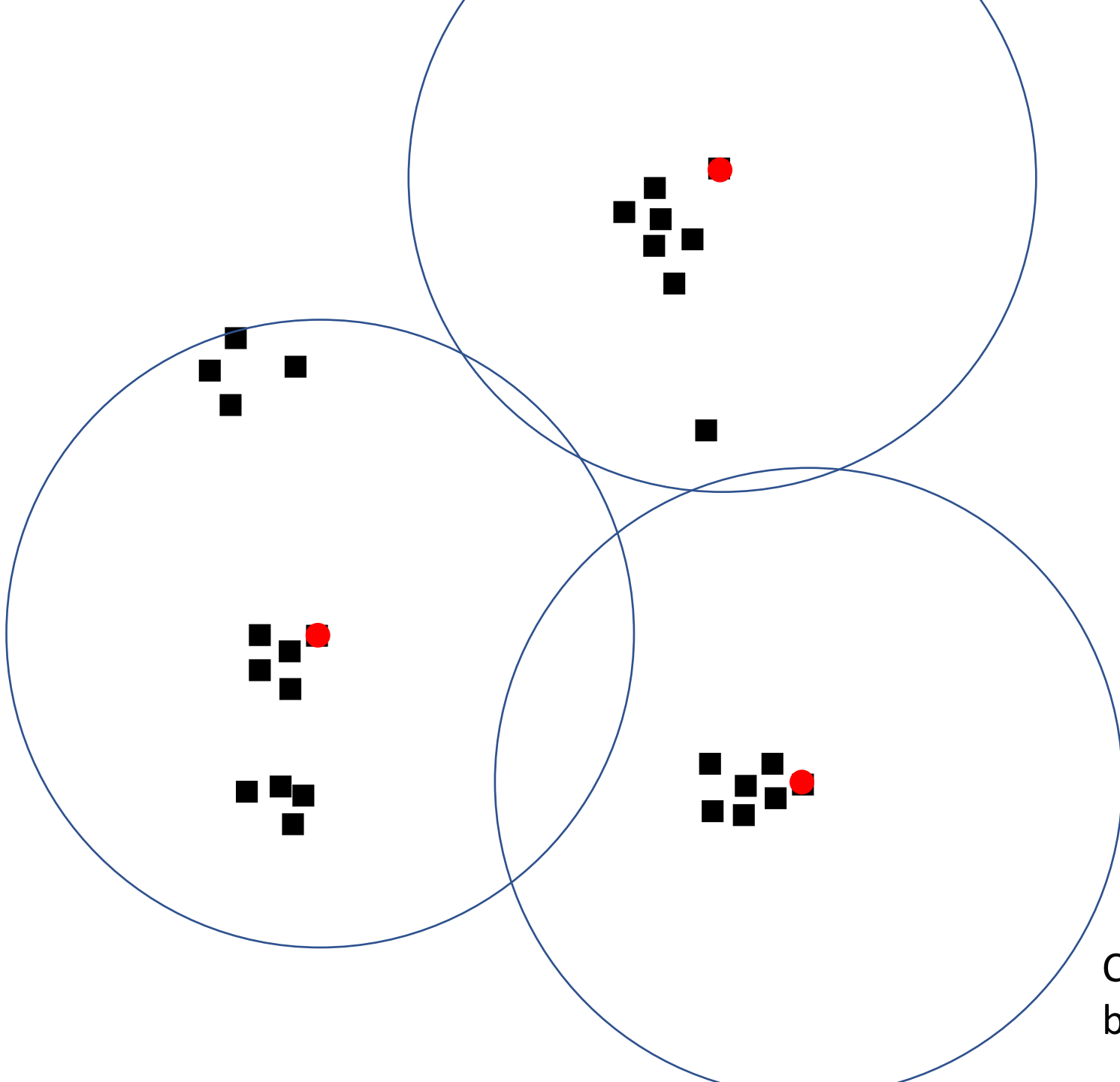
$i = 1$

Choice 1: Any site



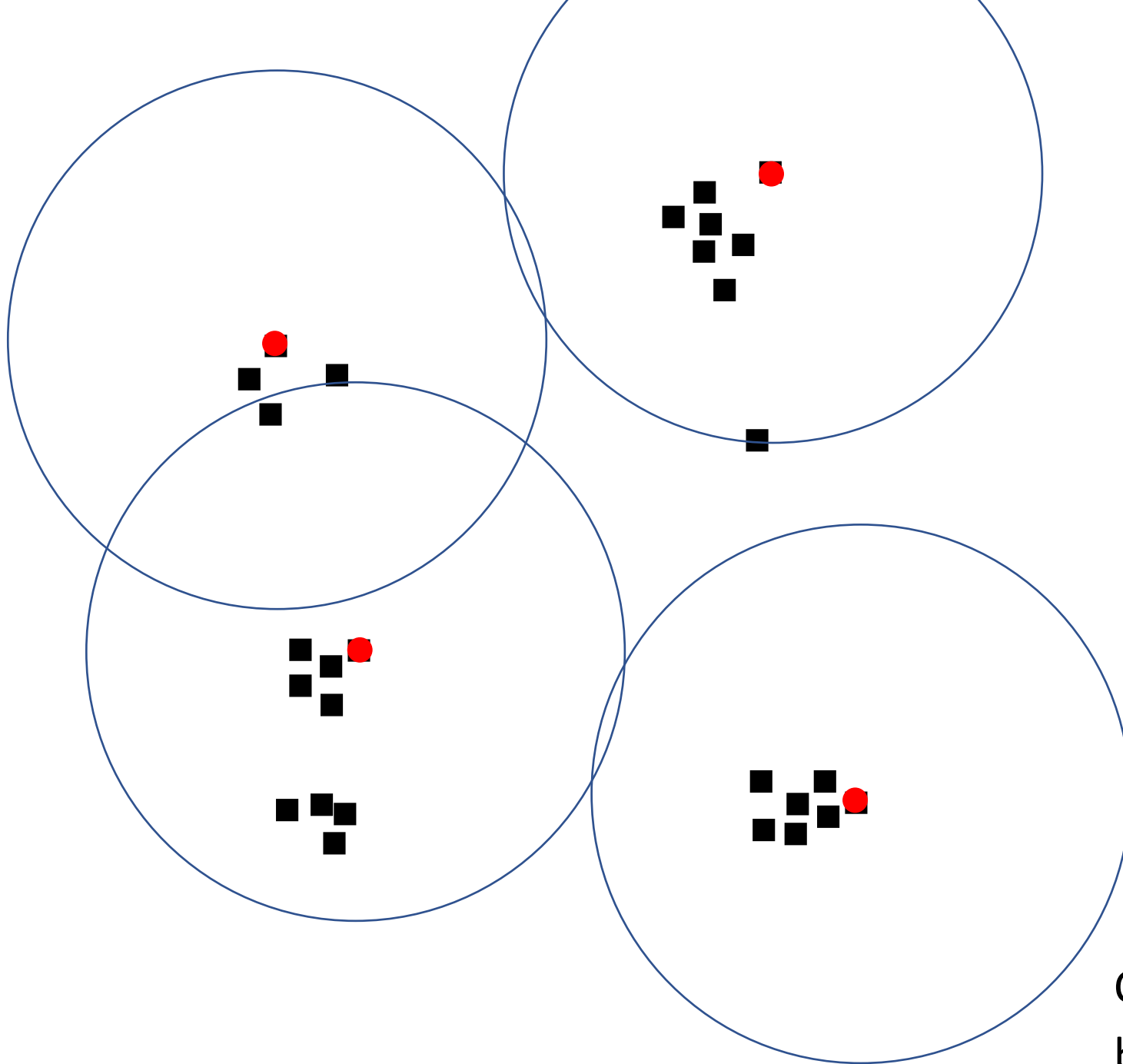
$i = 2$

Choice 2: Site most inconvenienced by choice 1.



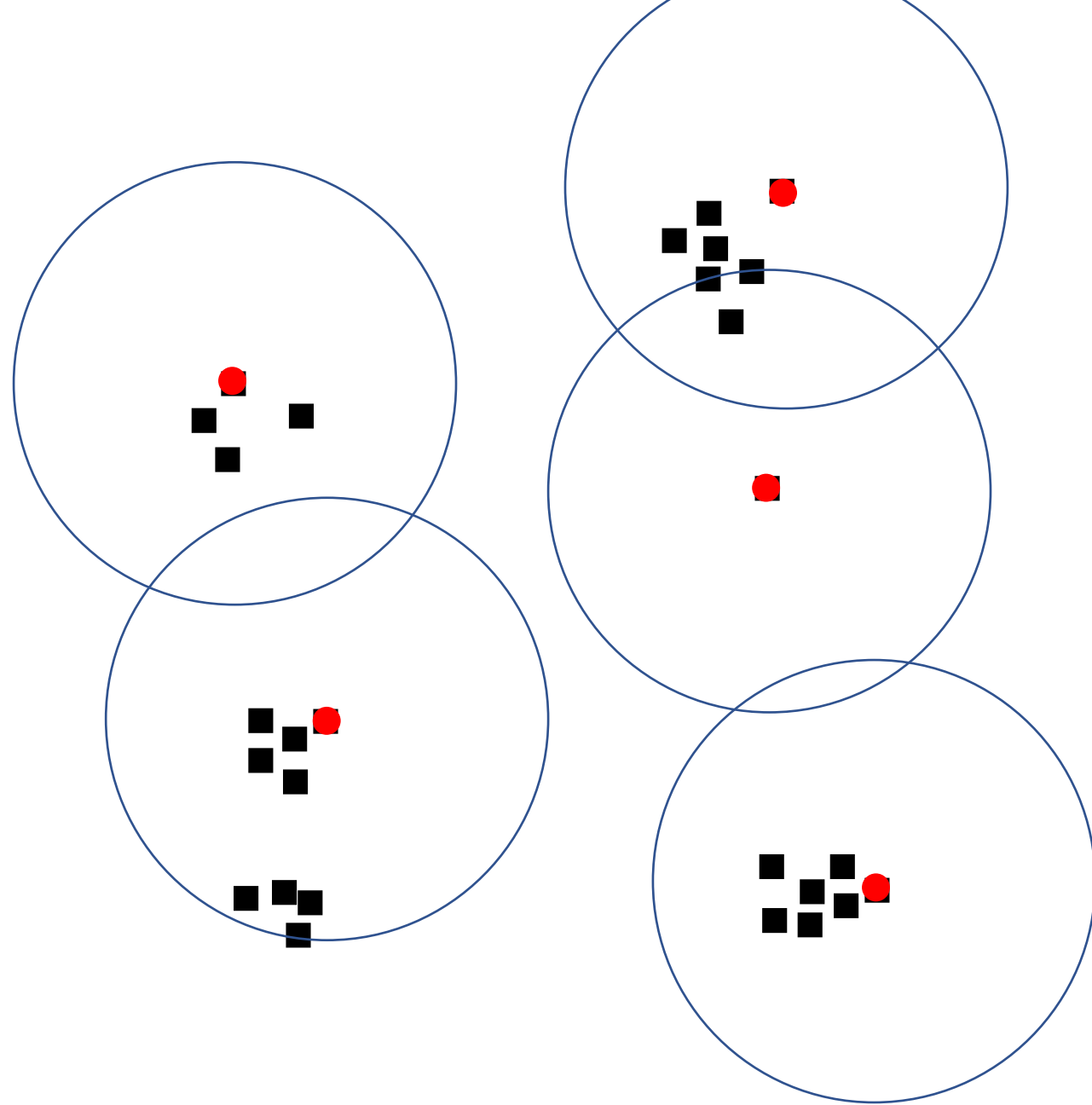
$i = 3$

Choice 3: Site most inconvenienced by choices 1 and 2.



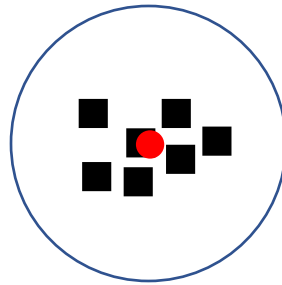
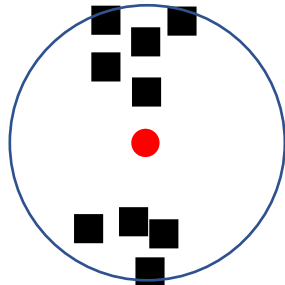
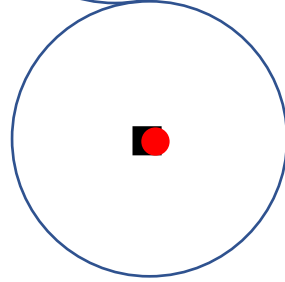
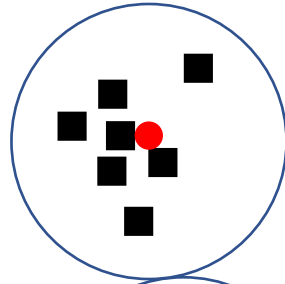
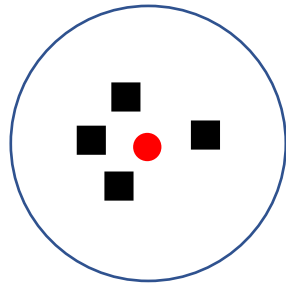
$i = 4$

Choice 4: Site most inconvenienced by choices 1, 2, and 3.



$i = 5$

Radius of the 5 centres chosen  
by the greedy algorithm



$k = 5$

Radius of an optimal set  
of 5 centres