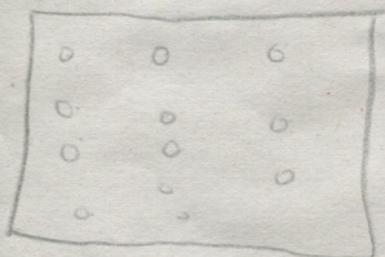


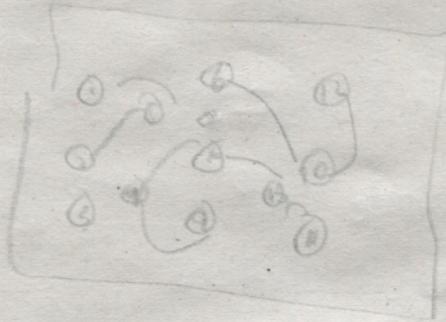
## TSO Midterm Exam

11 + 24

- ① its a problem with method uses in optimization,  
<sup>+2</sup> they have many solutions, we answer with branch-bound or simplex method
- ② For this type of problem branch bound, or a mpls  
<sup>+3</sup> simplex method  
<sup>+1</sup>
- ③ its better use when we need optimize the problem  
<sup>+1</sup> and then search the maximize or minimize
- ④ its a heuristic with algebraic expressions, we use this  
<sup>+1</sup> for 3 or more posible solutions
- ⑤ <sup>+3</sup> this problem need found the nearest point to arrive, if we draw a example



we have many points in the space to move, for the heuristic we have (1,8) points, we need finde the nearest using this heuristic, we move the points to locate new travel in the map



⑦ +0

- ⓐ this, not a feasible solution we can make  
 +5 the perfect match with that data numbers
- ⓑ this his the better for create the perfect match  
 +5 if we create the original each nodes they are not  
 in common node

Ⓒ M4, M3 and M5 this steps make a perfect match  
 If we see in the 2 charts we can create nodes  
 and move for each others ?

ⓓ +12 Too confusing

For this problem we make a pseudocode to create a heuristic, we need more each nodes for the perfect match

d // sort vertex by include the node and vertices  
 // initialize variables to find the better solution

Initialize variables

Selected\_MP = M3, M4, M5 ← ?

remaining = M3 = { (1,5), (2,6), (3,7), (4,8), (7,11), (9,10) }

M4 = { (1,2), (5,9), (6,10), (3,7), (4,8), (11,12) }

M5 = { (1,5), (2,6), (9,10), (3,4), (7,11), (8,12) }

node\_vertices ∈ (M3, M4, M5)

load a instance MP → IF they each with a same node there is not the correct

n, x, w = total solution

total = MB

value = M4 (MB, M4, M5) (X, [3])

for the 3 possible solutions

→ +0