

# dynamic simu.

## • social score

	A	B	C	D	E	F
1		S	A	B	C	D
2	S		0	24	-20	1
3	A		-4	0	-26	1
4	B		25	14	0	19
5	C		20	19	-4	0
6	D		-8	15	-21	-3
7						

## • steps

$$\begin{aligned} \text{eg. } A(1, 7) \\ B(3, 5) \end{aligned} \left. \vphantom{\begin{aligned} \text{eg. } A(1, 7) \\ B(3, 5) \end{aligned}} \right\} \text{steps}(A, B) &= \text{abs}(3-1) + \text{abs}(5-7) \\ &= 4 \\ \text{step } x &= 2 \quad \text{step } y = 2 \end{aligned}$$

## • energy = social score - steps

## • distance = $\sqrt{x^2 + y^2}$

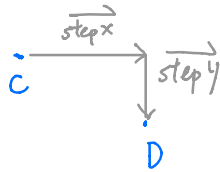
$$\begin{aligned} \text{eg. } A(1, 7) \\ B(3, 5) \end{aligned} \left. \vphantom{\begin{aligned} \text{eg. } A(1, 7) \\ B(3, 5) \end{aligned}} \right\} \text{dist}(A, B) &= \sqrt{2^2 + 2^2} \\ &= 2\sqrt{2} \end{aligned}$$

## • moving force

$$\text{moving force } x = \frac{\text{step } x \cdot \text{energy}}{\text{dist}}$$

$$\text{moving force } y = \frac{\overrightarrow{\text{step } y} \cdot \text{energy}}{\text{dist}}$$

p.s.



$$\frac{\overrightarrow{\text{step } x}}{\text{dist}} = \text{unit vector.}$$

unit vector  $\cdot$  energy represents moving force in X or Y axis  
sum of moving force decides how they move.

## • how to move

$$\text{if } \sum \text{moving force } X > \sum \text{moving force } Y$$

move X

else

move Y