

Date: \_\_\_\_\_



③

• Nhãn negative:  $(-1; 0)$   $(2; 1)$   $(2; -2)$

• Nhãn positive:  $(0; 0)$   $(1; 0)$

• Điểm xét:  $X(1, 1, 0.1)$

• Sử dụng CT tính KC Euclid:  $d = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$

•  $Z = (x_1, x_2)$

$x_1$	$x_2$	$y_i$	$d$
-1	0	(-)	2,24
2	1	(-)	1,42
2	-2	(-)	3,17
0	0	(+)	1,42
1	0	(+)	1,01

a)  $K=1$ . thì điểm  $X$  sẽ thuộc nhãn negative (-)

b)  $K=2$ . thì điểm  $X$  sẽ thuộc nhãn positive (+)

E: Enemy

F: Friend

U: Unclassified

(Cấp KC bằng Manhattan.)

Date:

$x = (x_1, x_2)$

(5)

$x_1$	$x_2$	$y$	$d(A, x)$	$d(b, x)$
1	0	E	5	3
3	0	E	7	3
0	2	F	6	2
1	2	F	7	1
3	2	E	9	1
-1	0	E	3	5
-2	0	E	2	6
-2	1	F	3	5
-2	4	F	6	6
-3	-2	E	1	9
-4	-1	F	1	9
0	-3	E	5	7
1	-3	F	6	6
2	-3	E	7	5
3	-1	E	6	4

Date:

	Creature A	Creature B
Using 3-NN.	Enemy (E)	Friend (F)
Using 5-NN.	Enemy (E)	Enemy (E)



①

	Flu			Flu			Flu			Flu		Flu	
Chills	Y	N	Sunny nose	Y	N	headache	Y	N	fever	Y	N	Y	N
Y	3	1	Y	4	1	No	1	1	Y	4	1	5	3
N	2	2	N	1	2	Mild	2	1	N	1	2		
						Strong	2	1					
Y	$\frac{3}{5}$	$\frac{1}{3}$	Y	$\frac{4}{5}$	$\frac{1}{3}$	No	$\frac{1}{5}$	$\frac{1}{3}$	Y	$\frac{4}{5}$	$\frac{1}{3}$	$\frac{5}{8}$	$\frac{3}{8}$
N	$\frac{2}{5}$	$\frac{2}{3}$	N	$\frac{1}{5}$	$\frac{2}{3}$	Mild	$\frac{2}{5}$	$\frac{1}{3}$	N	$\frac{1}{5}$	$\frac{2}{3}$		
						Strong	$\frac{2}{5}$	$\frac{1}{3}$					

$$\textcircled{A} P(\text{Flu} | \text{Patient}) = \frac{P(\text{Patient} | \text{Flu}) \cdot P(\text{Flu})}{P(\text{Patient})}$$

$$= \frac{0,038 \cdot \frac{5}{8}}{0,038 \cdot \frac{5}{8} + \frac{2}{81} \cdot \frac{3}{8}} = 0,72$$

$$\textcircled{B} P(\text{Not Flu} | \text{Patient}) = \frac{P(\text{Patient} | \text{Not Flu}) \cdot P(\text{Flu})}{P(\text{Patient})}$$

$$= \frac{\frac{2}{81} \cdot \frac{3}{8}}{0,038 \cdot \frac{5}{8} + \frac{2}{81} \cdot \frac{3}{8}} = 0,28$$

$$- P(\text{Flu} | \text{Patient}) > P(\text{Not Flu} | \text{Patient})$$

chills	sunny nose	headache	fever	flu
Y	N	Mild	Y	Y