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COM252

EXERCISE: 2

1, 2)

	A	B	C	D	E	F
A	0	10.05	45.28	60.41	50.8	25.18
B	10.05	0	35.23	50.36	40.79	15.13
C	45.28	35.23	0	15.13	6.4	20.1
D	60.41	50.36	15.13	0	10.2	35.23
E	50.8	40.79	6.4	10.2	0	25.71
F	25.18	15.13	20.1	35.23	25.7	0

$$d(A, B) = \sqrt{(A_x - B_x)^2 + (A_y - B_y)^2} = \sqrt{(10 - 20)^2 + (1 - 2)^2} = 10.05$$

$$d(A, C) = \sqrt{(10 - 55)^2 + (1 - 6)^2} = 45.28$$

$$d(A, D) = \sqrt{(10 - 70)^2 + (1 - 8)^2} = 60.41$$

$$d(A, E) = \sqrt{(10 - 60)^2 + (1 - 10)^2} = 50.8$$

$$d(A, F) = \sqrt{(10 - 35)^2 + (1 - 4)^2} = 25.18$$

$$d(B, C) = \sqrt{(20 - 55)^2 + (2 - 6)^2} = 35.23$$

$$d(B, D) = \sqrt{(20 - 70)^2 + (2 - 8)^2} = 50.36$$

$$d(B, E) = \sqrt{(20 - 60)^2 + (2 - 10)^2} = 40.79$$

$$d(B, F) = \sqrt{(20 - 35)^2 + (2 - 4)^2} = 15.13$$

$$d(C, D) = \sqrt{(55 - 70)^2 + (6 - 8)^2} = 15.13$$

$$d(C, E) = \sqrt{(55 - 60)^2 + (6 - 10)^2} = 6.4$$

$$d(C, F) = \sqrt{(55 - 35)^2 + (6 - 4)^2} = 20.1$$

$$d(D, E) = \sqrt{(70 - 60)^2 + (8 - 10)^2} = 10.2$$

$$d(D, F) = \sqrt{(70 - 35)^2 + (8 - 4)^2} = 35.23$$

$$d(E, F) = \sqrt{(60 - 35)^2 + (10 - 4)^2} = 25.71$$

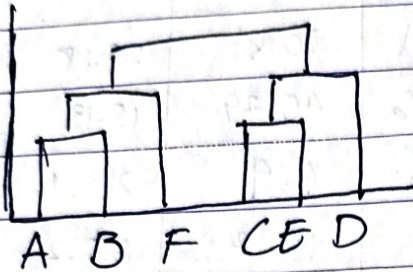


3.4, 6)

CLUSTER  $\{C, E\}$ : 6.4  
 $\{A, B, F\}$ : 10.05

$\{C, E\}, D$ : 10.2  
 $\{A, B, F\}, F$ : 15.13

$\{A, B, F\} - \{C, E, D\}$ :  
 20.1



a) CLUSTER 1  $\{A, B, F\}$ :

- LOW VALUE PLAYER, THEY BET SMALL AMOUNT AND VISIT A FEW TIMES. THESE PEOPLE ARE MOST LIKELY GO TO ~~CASINO~~ CASINO FOR ENTERTAINMENT ONLY. YOU CAN BUILD THEM BY OFFERING LOYALTY PROGRAMS FOR MORE ENGAGEMENT.

CLUSTER 2  $\{C, E, D\}$

- HIGH VALUE PLAYER, THEY ARE THE MOST VALUABLE CUSTOMER IN THE CASINO AS THEY VISIT FREQUENTLY AND BET MORE. ~~THEY~~ YOU CAN BUILD THEM MORE BY OFFERING EXCLUSIVE DEALS OR PROMOS.