A $k=2$

B and C closest

1 d(AB) = 4

2 d(AC) = 5

k Nearest neighbor		average RD	LRD
A 5 = AC	set AB AC	$d_2(A) = 5$	$\frac{1}{5}$
B 1.5 = BC	set BD BC	$d_2(B) = 1.5$	$\frac{1}{1.5}$
C 1.5 = BC	set CD BC	$d_2(C) = 1.5$	$\frac{1}{1.5}$
D 1.2 = BD	set CD BD	$d_2(D) = 1.2$	$\frac{1}{1.2}$

RD AB max(1.5, 4)

RD AC max(1.5, 5)

RD BD max(1.2, 1.2)

RD BC max(1.5, 1.5)

RD CD max(1, 1.2)

RD BC max(1.5, 1.5)

RD CD max(1, 1.5)

RD BD max(1.2, 1.5)

LOF: $\frac{\frac{lrd_2B}{lrd_2A} + \frac{lrd_2C}{lrd_2A}}{2}$

$= \frac{\frac{1.5}{\frac{1}{5}} + \frac{1.5}{\frac{1}{5}}}{2} =$

3.333333

C $k=2$

B and D closest

1 $d(CD) = 1.2$

2 $d(BC) = 1.5$

k Nearest neighbor

A 5 = AC set AB AC

B 1.5 = BC set BD BC

C 1.5 = BC set CD BC

D 1.2 = BD set CD BD

RD AB max (1.5, 4)

RD AC max (1.5, 5)

RD BD max (1.2, 1.2)

RD BC max (1.5, 1.5)

RD CD max (1, 1.5)

RD BD max (1.2, 1.5)

	average RD	LRD
A	$d_2(A) = 5$	$\frac{1}{5}$
B	$d_2(B) = 1.5$	$\frac{1}{1.5}$
C	$d_2(C) = 1.5$	$\frac{1}{1.5}$
D	$d_2(D) = 1.2$	$\frac{1}{1.2}$

$$\frac{\frac{\frac{1}{1.2}}{\frac{1}{1.5}} + \frac{\frac{1}{1.5}}{\frac{1}{1.5}}}{2} =$$

1.125