Q Develop single link clusters.

Points given are —
A(2,2), B(5,2), C(7,3), D(8,4), E(10,6),
F(12,8), G(6,6), H(5,5), I(5,8), J(3,7),
K(2,6)

(1)

	A	B	C	D	E	F	G	H	I	J	K
A	0	3	5.10	6.32	8.94	11.66	5.66	4.24	6.7	5.10	4.00
B	3	0	2.24	3.61	6.40	9.21	4.12	3	6	5.39	5
C	5.10	2.24	0	1.41	4.24	7.07	3.16	2.83	5.3	5.66	5.83
D	6.32	3.61	1.41	0	2.83	5.66	2.83	3.16	5	5.83	6.32
E	8.94	6.40	4.24	2.83	0	2.83	4	5.10	5.3	7.07	8.00
F	11.66	9.21	7.07	5.66	2.83	0	6.32	7.62	7	9.01	10.20
G	5.66	4.12	3.16	2.83	4	6.32	0	1.41	2.24	3.16	4.0
H	4.24	3	2.83	3.16	5.10	7.62	1.41	0	3.0	2.83	3.16
I	6.71	6	5.39	5	5.39	7	2.24	3-0	0	2.24	3.61
J	5.10	5.39	5.66	5.83	7.09	9.01	3.16	2.83	2.24	0	1.41
K	4.00	5	5.83	6.32	8.00	10.20	4.0	2.16	3.61	1.41	0

②

	A	B	C,D	E	F	G	H	I	J	K
A	0	3	5.10	8.94	11.66	5.66	4.24	6.71	5.10	4.0
B	3	0	2.24	6.40	9.21	4.12	3	6	5.39	5
C,D	5.10	2.24	0	2.83	5.66	2.83	2.83	5	5.66	5.83
E	8.94	6.40	2.83	0	2.83	4	5.10	5.39	7.07	8.0
F	11.66	9.21	5.66	2.83	0	6.32	7.62	7	9.01	10.20
G	5.66	4.12	2.83	4	6.32	0	1.41	2.24	3.16	4.0
H	4.21	3	2.83	5.10	7.62	1.41	0	3.0	2.83	3.16
I	6.71	6	5	5.39	7	2.24	3.0	0	2.24	3.61
J	5.10	5.39	5.66	7.07	9.01	3.16	2.83	2.24	0	1.41
K	4.00	5	5.83	8.0	10.20	4.0	3.16	3.61	1.41	0

③

	A	B	C,D	E	F	G,H	I	J	K
A	0	3	5.10	8.94	11.66	4.24	6.71	5.10	4.00
B	~~5.10~~	0	2.24	6.40	9.21	3	6	5.39	5
C,D	5.10	2.24	0	2.83	5.66	2.83	5	5.66	5.83
E	8.94	6.40	2.83	0	2.83	4	5.39	7.07	8.0
F	11.66	9.21	5.66	2.83	0	6.32	7	9.01	10.20
G,H	4.24	3	2.83	4	6.32	0	2.24	2.83	3.16
I	6.71	6	5	5.39	7	2.24	0	2.24	3.61
J	5.10	5.39	5.66	7.07	9.01	2.83	2.24	0	1.41
K	4.0	5	5.83	8.0	10.20	3.16	3.61	1.41	0

	A	B	C,D	E	F	G,H	I	J,K
A	0	3	5.10	8.94	11.66	4.24	6.71	4.0
B	3	0	2.24	6.40	9.21	3	6	5
C,D	5.10	2.24	0	2.83	5.66	2.83	5	5.66
E.	8.94	6.40	2.83	0	2.83	4	5.39	7.07
F	11.66	9.21	5.66	2.83	0	6.32	7	9.01
G,H	4.24	3	2.83	4	6.32	0	2.24	2.83
I	6.71	6	5	5.39	7	2.24	0	2.24
J,K	4.0	5	5.66	7.07	9.01	2.83	2.24	0

(5)

	A	B, C, D	E	F	G, H	I	J, K
A	0	3	8.94	11.66	4.24	6.71	4.0
B, C, D	3	0	2.83	5.66	2.83	5	5
E	8.94	2.83	0	2.83	4	5.39	7.07
F	11.66	5.66	2.83	0	6.32	7	9.01
G, H	4.24	2.83	4	6.32	0	2.24	2.83
I	6.71	5	5.39	7	2.24	0	2.24
J, K	4.0	5	7.07	9.01	2.83	2.24	0

(6)

	A	B, C, D	E	F	G, H, I	J, K
A	0	3	8.94	11.66	4.24	4.0
B, C, D	3	0	2.83	5.66	2.83	5
E	8.94	2.83	0	2.83	4	7.07
F	11.66	5.66	2.83	0	6.32	9.01
G, H, I	4.24	2.83	4	6.32	0	2.24
J, K	4.0	5	7.07	9.01	2.24	0

	A	B,C,D	E	F	G,H,I,J,K
A	0	3	8-94	11-66	4-0
B,C,D	~~3~~	0	2-83	5-66	2-83
E	8-94	2-83	0	2-83	4-0
F	11-66	5-66	2-83	0	6-32
G,H,I,J,K	4-0	2-83	4-0	6-32	0

⑧

	A	B,C,D,E	F	G,H,I,J,K
A	0	3	11-66	4-0
B,C,D,E	3	0	2-83	2-83
F	11-66	2-83	0	6-32
G,H,I,J,K	4-0	2-83	6-32	0

⑨

	A	B,C,D,E,F	G,H,I,J,K
A	0	3	4
B,C,D,E,F	3	0	2-83
G,H,I,J,K	4	2-83	0

⑩

	A	B,C,D,E,F,G,H,I,J,K
A	0	3
B,C,D,E,F,GH,I,J,K	3	0