Determine the expected search cost of an optimal binary search tree for a set $n=5$ keys with the following probabilities. We assume that all searches are successful.

Key	1	2	3	4	5
proabaility	.25	.2	.05	.2	.3

(A)2.15 (B)1.15 (C)2.10 (D)1.10 (E)2.0 【104 年交大資工所】

Ans.

2022. 4. 4

花 ㄅ：10

	0	1	2	3	4	5
P		.25	.2	.05	.2	.3
q	0	0	0	0	0	0

w	0	1	2	3	4	5
1	0_1	.25	.45	.5	.7	1
2		0_2	.2	.25	.45	.75
3			0_3	.05	.25	.55
4				0_4	.2	.5
5					0_5	.3
6						0_6

e	0	1	2	3	4	5
1	0_1	.25	.65	.8	1.25	(2.1)
2		0_2	.2	.3	.75	1.35
3			0_3	.05	.3	.9
4				0_4	.2	.7
5					0_5	.3
6						0_6

(C) ✗