dfs								
index	best node	node depth	chosen step	distance	r_letter	r_word	r_game	cost time
0	877	6	67	50.6	0.68	0.3	FALSE	100.487972
1	46	5	6	39.2	0.76	0.5	FALSE	56.75079274
2	49	4	3	31.1	0.64	0.4	FALSE	29.40311956
3	57	5	6	42.8	0.72	0.4	FALSE	136.3714292
4	57	5	6	42.8	0.72	0.4	FALSE	2.122560024
5	111	5	17	42.7	0.8	0.4	FALSE	174.2975435
6	176	9	10	64.2	0.52	0.3	FALSE	27.30127668
7	34	3	2	24.1	0.4	0.2	FALSE	40.39356399
8	38	4	3	31.2	0.64	0.4	FALSE	26.956038
9	122	6	24	44.3	0.72	0.4	FALSE	201.2965734
10	32	3	2	24.8	0.24	0.1	FALSE	101.1313226
11	1	1	0	9.5	0.04	0	FALSE	143.559026
12	68	5	9	44	0.68	0.4	FALSE	143.1334813
13	27	3	2	22.6	0.52	0.3	FALSE	26.17097807
14	9	2	1	16.8	0.2	0.1	FALSE	283.8703856
15	370	3	75	25.2	0.36	0.2	FALSE	149.4783664
16	1	1	0	6.5	0.12	0	FALSE	30.54310131
17	6	2	1	16.9	0.2	0.1	FALSE	91.87434745
18	342	9	16	69.6	0.56	0.3	FALSE	79.7371912
19	140	9	10	43.8	0.52	0.3	FALSE	28.25970411
average	--	--	--	--	0.502	0.275	0	93.65693866

total cost time 1873.138773

dfs+sd								
index	best node	node depth	chosen step	distance	r_letter	r_word	r_game	cost time
0	1032	9	97	49.8	0.16	0	FALSE	136.8779991
1	192	9	27	75.2	0.76	0.5	FALSE	136.4469063
2	98	9	8	64.3	0.56	0.3	FALSE	33.8690598
3	145	9	9	66.7	0.36	0.2	FALSE	18.74417114
4	1238	9	85	56.4	0.28	0	FALSE	138.3155177
5	116	9	8	77.4	0.68	0.3	FALSE	49.75665975
6	929	9	55	52	0.64	0.4	FALSE	76.03572321
7	170	9	27	65.1	0.64	0.3	FALSE	72.48099899
8	99	9	8	75.2	0	0	FALSE	18.99485612
9	156	9	36	55	0.12	0	FALSE	186.365031
10	178	9	20	79.3	0.24	0.1	FALSE	54.58197665
11	606	9	84	80.9	0.2	0.1	FALSE	71.23422265
12	223	9	37	80.4	0.44	0.2	FALSE	62.07455111
13	187	9	37	77.5	0.76	0.5	FALSE	140.8976138
14	106	9	8	79.4	0.24	0.1	FALSE	31.09319997
15	131	9	19	71.5	0.52	0.3	FALSE	70.91791248
16	128	9	9	57.9	0.32	0	FALSE	37.69242954
17	140	9	13	80.4	0.2	0.1	FALSE	63.49943852
18	128	9	8	71.4	0.48	0.2	FALSE	32.62987065
19	128	9	8	59.5	0.36	0.2	FALSE	14.19990873
average	--	--	--	--	0.398	0.19	0	72.33540236

total cost time 1446.708047

r_word to cost time