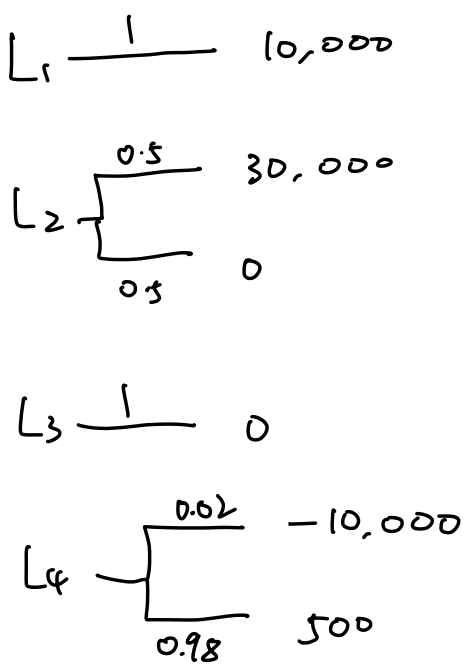
Example 5

Q : rank



Solution

$-10,000$ 0 500 10000 30000

least favorable

most favorable

$U(\$30000) = 1$

$U(\$-10000) = 0$

reword	utility
10000	0.9
0	0.6
30000 (most fav)	1
-10000 (least fav)	0
500	0.62

$E(u \text{ of } L_4) = 0.02 \times u(-10000) + 0.98\, u(500)$

$= 0.02 \times 0 + 0.98 \times 0.62$

$= 0.6076$

$E(u \text{ of } L_1) = 1 \times u(10000) = 1 \times 0.9 = 0.9$

$E(u \text{ of } L_2) = 0.5 \times u(30000) + 0.5\, u(0) = 0.5 \times 1 + 0.5 \times 0.6 = 0.8$

$E(u \text{ for } L_3) = 1 \times u(0) = 1 \times 0.6 = 0.6$

L_1 is chose

(2) Rank the lotteries acording expected pay off

			EU
L_1	1	10,000	10,000
L_2	0.5	30,000	15,000 ✓ choice L_2
	0.5	0	
L_3	1	0	0
L_4	0.02	−10,000	$500 \times 0.98 - 10000 \times 0.02$
	0.98	500	$= 5 \times 98 - 200$
			$= 290$