IE5203 Decision Analysis
Assignment #2
Due: Fri, 18 October 2024 (7 pm)

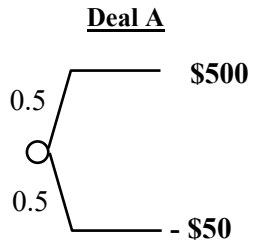
You may use computing tools or software for your computations but you must show your workings like the equations to be solved by a solver in your submission.
Submit your solutions at the Drop Box outside the ISEM Department Office at E1A-06-25 or to the professor or tutor at the end of class meetings.

Question (Total Marks 50)

Jenny's wealth utility function (w is in dollars) is as follows:

$$u(w) = \begin{cases} \ln(1+w) & w \geq 0 \\ w & w < 0 \end{cases}$$

Jenny current wealth is \$600 in cash and she also owns Deal A as follows:

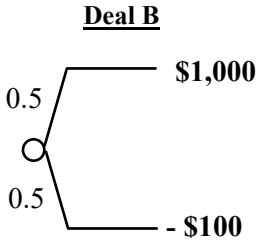


(***a***) Determine Jenny's personal indifferent selling price for Deal A. (10 marks)

(***b***) What is Jenny's current risk tolerance in dollars? (5 marks)

(***c***) Is Jenny current risk-averse, risk-neutral or risk-seeking in attitude? Explain your answer. (5 marks)

(***d***) Jenny is offered Deal B as follows:



What is Jenny's personal indifferent buying price for Deal B? (10 marks)

(***e***) Jenny buys Deal B for \$240 and her wealth is now \$360 plus Deal A and Deal B. Alice offers to buy Deals A and Deal B from Jenny. Determine Jenny's personal indifferent selling price for Deal A and B as a bundle. (10 marks)

(***f***) Alice is **risk neutral** and her current wealth is \$1000. What is the highest price that Jenny is able to sell Deals A and B as a bundle to Alice? Explain your answer. (10 marks)