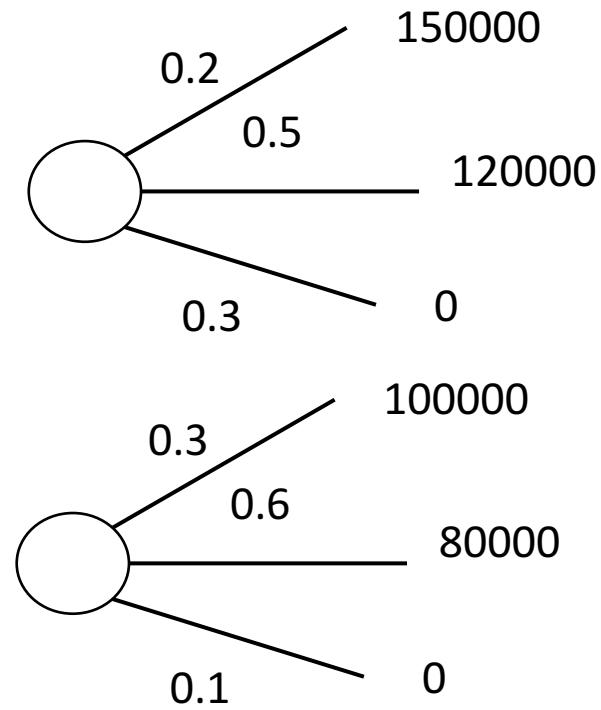


- A building contractor is submitting an estimate to a potential customer for carrying out some construction work at the customer's premises.
- The builder reckons that if he offers to carry out the work for 150,000 TL there is a 0.2 probability that the customer will agree to the price, a 0.5 probability that the customer will bargain so that a price of 120,000 TL would eventually be agreed and a 0.3 probability that the customer will simply refuse the offer and give the work to another builder.
- If the builder offers to carry out the work for 100,000 TL he reckons that there is a 0.3 probability that the customer will accept this price, a 0.6 probability that the customer will bargain so that a price of 80,000 TL will eventually be agreed and a 0.1 probability that the customer will refuse the offer and take the work elsewhere.
- Determine which price the builder should quote in order to maximize EMV he receives from the customer.

- Suppose that, after some questioning, the builder is able to make the following statements:
- *"I am indifferent between receiving 120,000 TL for certain or entering a lottery that will give me a 0.9 probability of 150,000 and a 0.1 probability of winning 0 TL."*
- *"I am indifferent between receiving 100,000 TL for certain or entering a lottery that will give me a 0.85 probability of winning 120,000 TL and a 0.15 probability of winning 0 TL."*
- *"I am indifferent between receiving 80,000 TL for certain or entering a lottery that will give me a 0.75 probability of winning 120,000 TL and a 0.25 probability of winning 0 TL."*
- Find the builder's utility function, sketch its graph and comment on what it shows.

| Money | Utility |
|---------|---------|
| 150 000 | 1 |
| 120 000 | 0.9 |
| 100 000 | 0.765 |
| 80 000 | 0.675 |
| 0 | 0 |



- If the builder wants to maximize the expected utility which alternative should she/he select?