

Started on	Monday, 26 September 2022, 11:26 AM
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The _____ correspond to future events that are not under the control of the decision maker.

- ☐ a. payoffs
- ☐ b. alternatives
- ☒ c. states of nature
- ☐ d. criteria



The correct answer is: states of nature

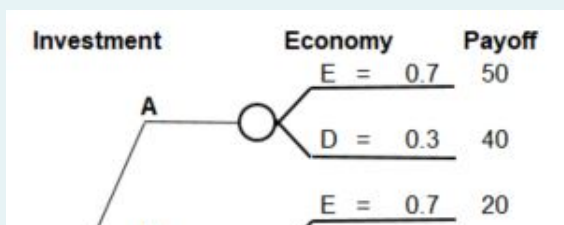
A course of action intended to solve a problem is called a(n)

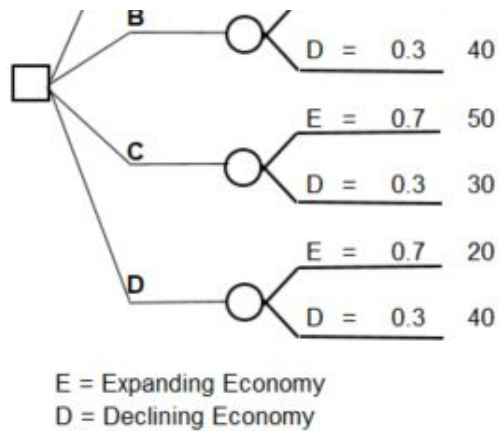
- ☒ a. alternative.
- ☐ b. option.
- ☐ c. criteria.
- ☐ d. decision.



The correct answer is: alternative.

An investor is considering 4 investments, A, B, C, D. The payoff from each investment is a function of the economic climate over the next 2 years. The economy can expand or decline. The following decision tree has been developed for the problem. The investor has estimated the probability of a declining economy at 30% and an expanding economy at 70%. What is the correct decision for this investor based on an expected monetary value criteria?





- ☐ a. B
- ☐ b. C
- ☐ c. D
- ☒ d. A



The correct answer is: A

An investor is considering 4 investments, A, B, C and leaving his money in the bank. The payoff from each investment is a function of the economic climate over the next 2 years. The economy can expand or decline. The following payoff matrix has been developed for the decision problem. The investor has estimated the probability of a declining economy at 70% and an expanding economy at 30%. What decision should be made according to the expected regret decision rule?

Payoff Matrix		
Probability	0.7	0.3
	Economy	
Investment	Decline	Expand
A	-10	90
B	20	50
C	40	45
Bank	15	20

- ☐ a. B
- ☐ b. C
- ☒ c. Bank
- ☐ d. A



The correct answer is: C

A square node in a decision tree is called a _____ node.

- ☐ a. chance
- ☐ b. random

☒ c. decision



☐ d. event

The correct answer is: decision

The decision rule which selects the alternative associated with the smallest maximum opportunity loss is the _____

☐ a. minimin decision rule.

☐ b. maximin decision rule.

☐ c. minimax regret decision rule.

☒ d. maximax decision rule.



The correct answer is: minimax regret decision rule.

Which of the following is a goal of decision analysis?

☐ a. Avoiding decisions leading to bad outcomes.

☐ b. Reduce the role of luck in a decision.

☒ c. Help individuals make good decisions.



☐ d. Ensure decisions lead to good outcomes.

The correct answer is: Help individuals make good decisions.

Decision analysis supports all but one of the following goals. Which goal is not supported?

☐ a. Analyse decision problems logically.

☒ b. Help ensure selection of good outcomes.



☐ c. Help make good decisions.

☐ d. Incorporate problem uncertainty.

The correct answer is: Help ensure selection of good outcomes.

Which decision rule pessimistically assumes that nature will always be "against us" regardless of what decision we make?

☐ a. maximax decision rule.

☐ b. minimin decision rule.

☒ c. minimax regret decision rule.



☐ d. maximin decision rule.

The correct answer is: maximin decision rule.

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