Lecture 4 practice exercises

Question 1:

For each scenario below, classify it as a priori probability, statistical probability, or estimates, and justify your decision in 1–2 sentences.

a) Probability of getting heads with a fair coin

b) Predicting quarterly defect rates on a mature assembly line with rich historical data.

Question 2:

Explain why R&D expenditure can be seen as the purchase of a growth option. In your answer, distinguish between:

- how irreversibility differs for fixed versus R&D investments, and
- why greater uncertainty may increase, rather than reduce, R&D spending.

Question 3:

Define scenario analysis. What is its purpose and how does it differ from sensitivity analysis?