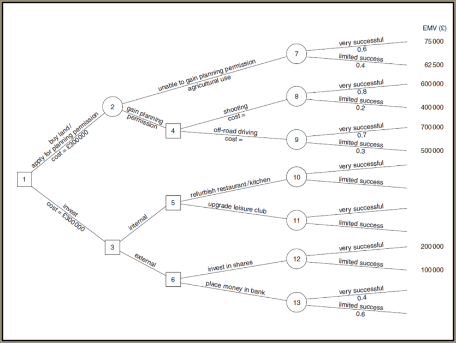


3.3.3 Decision trees

Write the definition of decision trees here:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Step 1: How the decision tree works

A decision tree traces an \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ outcome of a decision, the results can be compared and the business can decide which \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ would be the most **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

This is a **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** approach (means it uses numbers) it is **pictorial** as it’s in the shape of a tree and it predicts the best bet \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ so a business knows what to spend its money on

The data is usually based on \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ data from the business, for example they would know the probability of success of launching a new product would be 20% based on previous \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ launches and how \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ they had turned out

Step by step how to draw a decision tree

Example 1 – complete the tree

Launch a new product

Start a marketing campaign on the old product

A

B

Success

Success

Failure

Failure

0.2

0.8

0.4

0.6

**Example 2 complete the tree**

**Launch a new product £1 million**

**Start a marketing campaign on the old product**

**£0.7 million**

A

B

Success

Failure

Failure

0.2

0.8

0.4

0.6

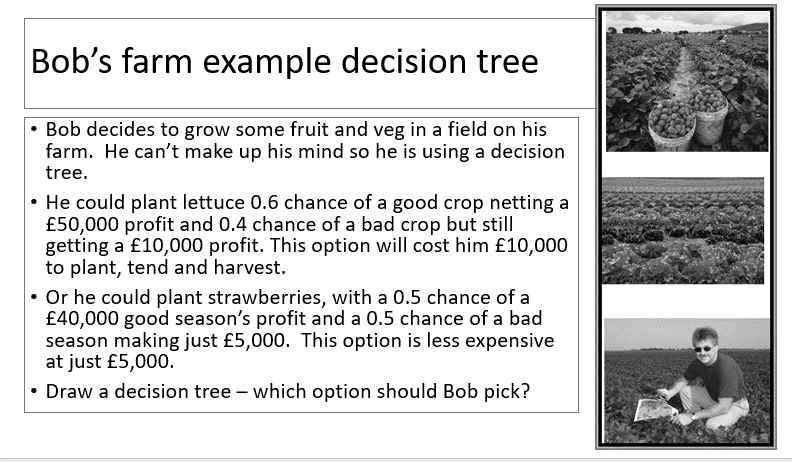
£20 million

£1 million

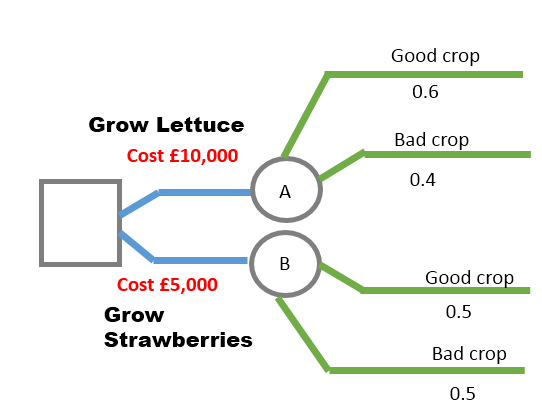
£7 million

£1 million

Success

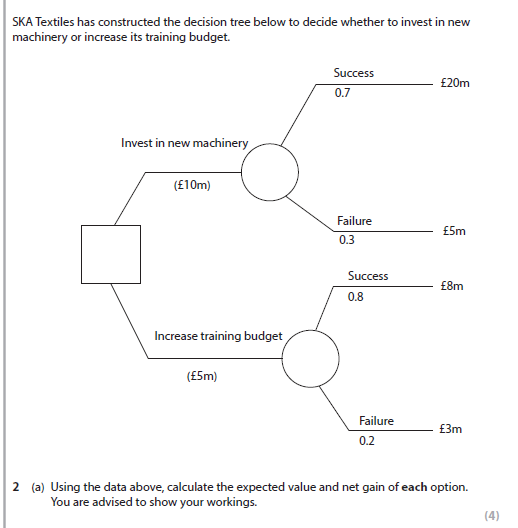


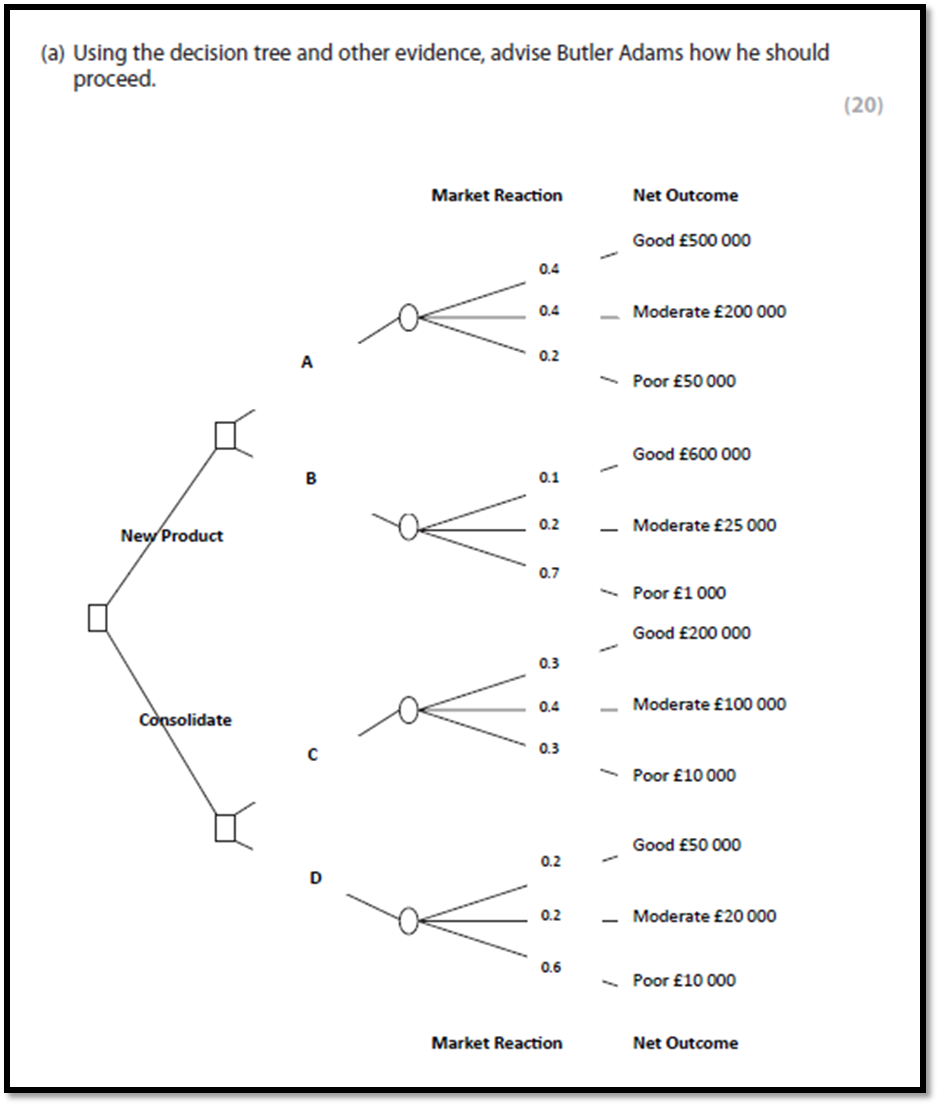
Bob’s farm example decision tree - can you complete the tree?



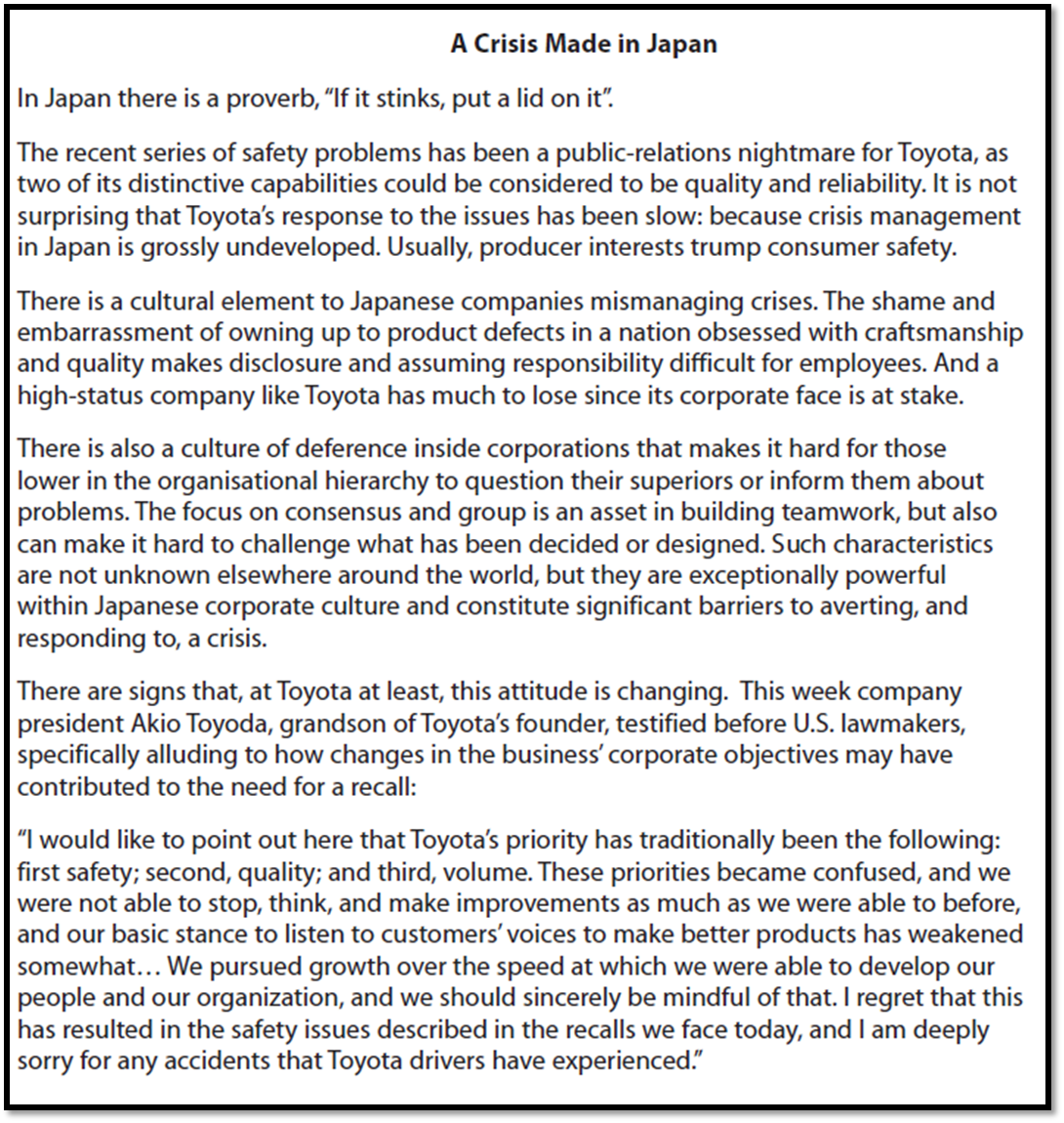
Limitations

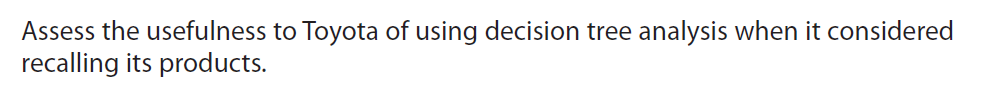
|  |  |
| --- | --- |
| 1 |  |
| 2 |  |
| 3 |  |
| 4 |  |
| 5 |  |





Just complete the calculation on this question as you don’t have the full case study.





[10]