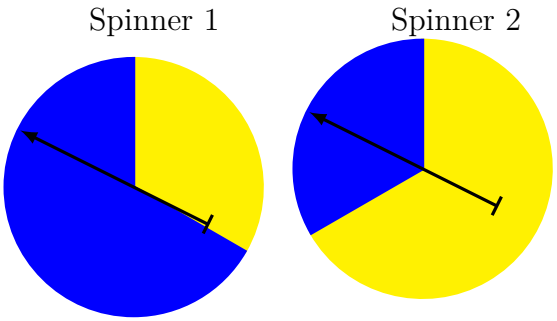
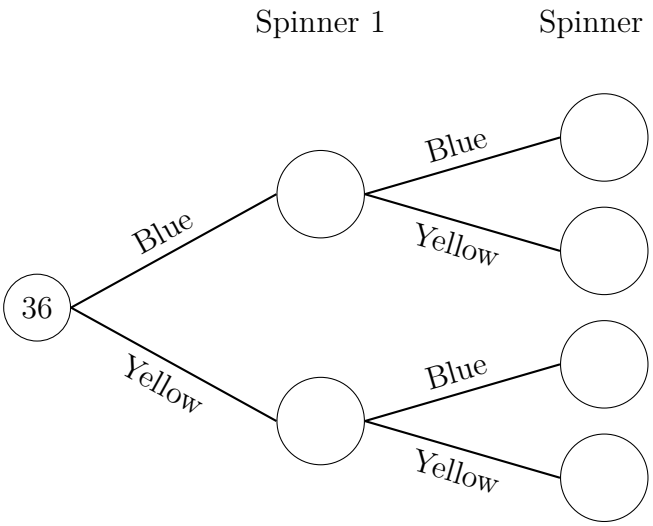
2.6 Lesson 6 Probability Tree diagrams

Exercise 12 polypad link https://polypad.org/c7MCnrZR2Lf6A

The spinners are spun together.





1) List all of the possible outcomes .....

2) We spin both spinners 36 times.

   a) Estimate the number of blue outcomes for spinner 1.

   .....

   b) For a blue spinner 1, estimate the number of blue outcomes for spinner 2.

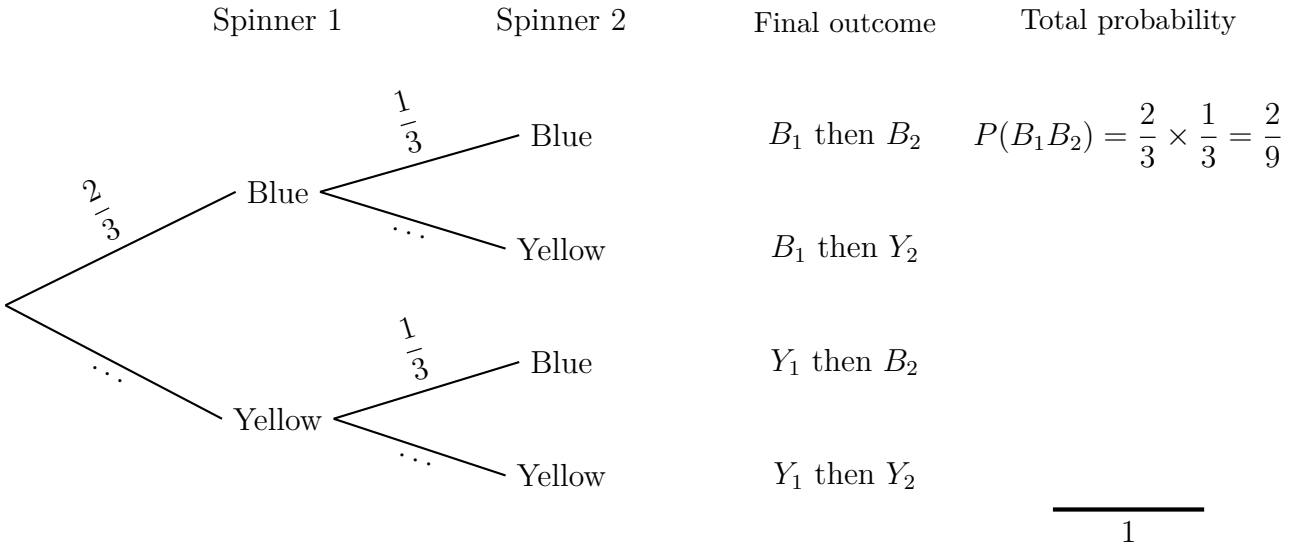
   .....

   c) Estimate the probability of both spinners at blue.

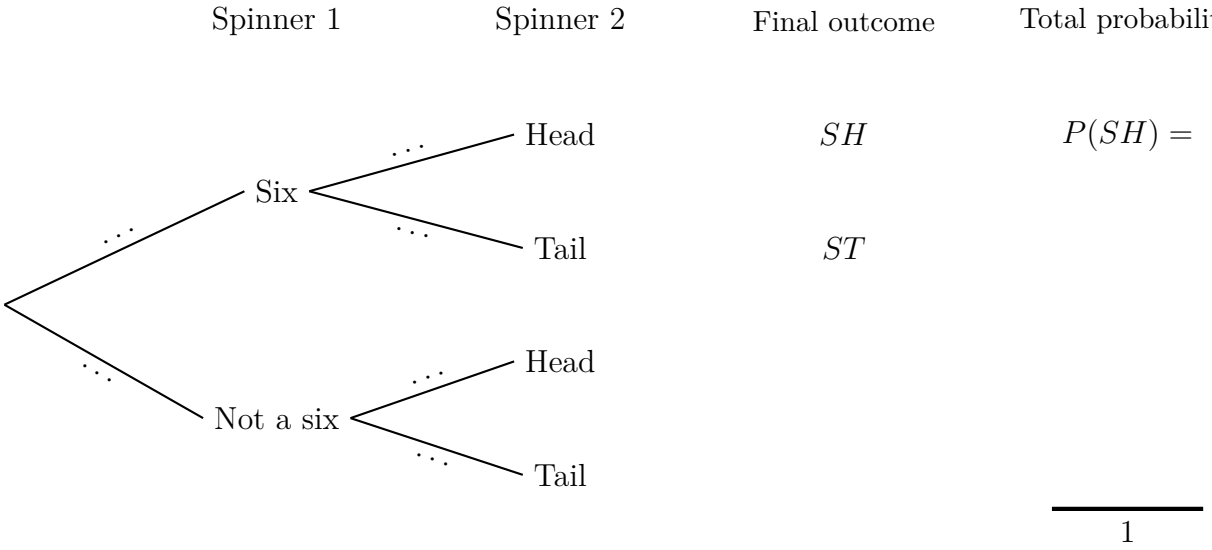
   .....

Probability trees are a handy tool to calculate probabilities of outcomes made of a **sequence of events**.

- A path on the tree leads to a final outcome.
- All final outcomes are mutually exclusive.
- The probability of a final outcome is the product of probabilities along branches.
- Probabilities on branches from the same node add up to 1.



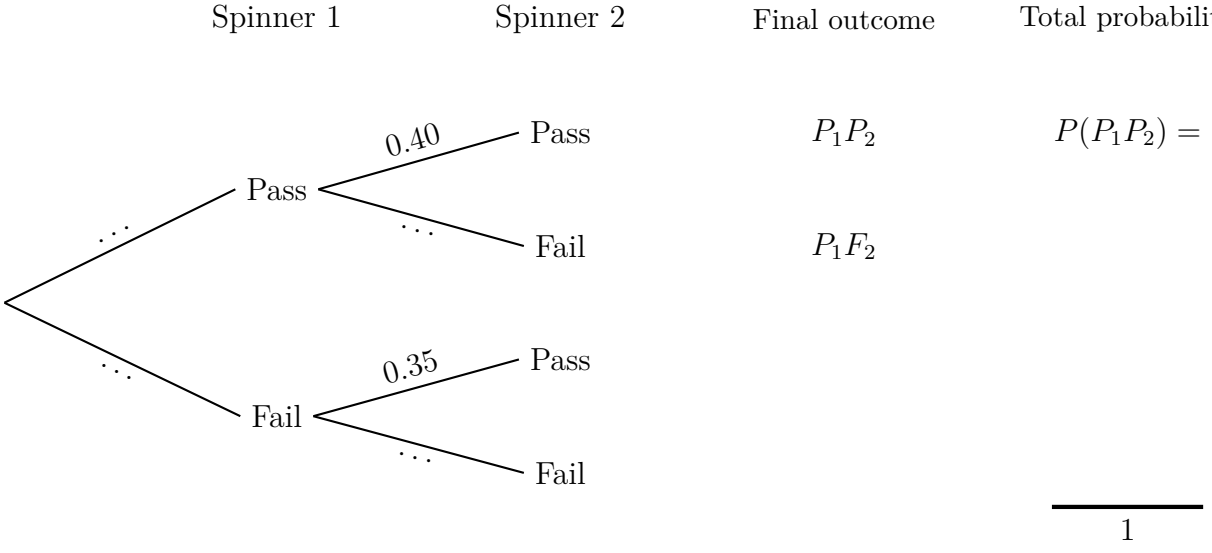
Exercise 13 A game offers a prize if when you throw a die you get a six and when you flip a coin you get a Head. The probability tree below shows the possible outcomes when you play:



a) Complete the tree to show the probabilities of all four outcomes.

b) What is the probability that you win, that is throw a six and flip a Head ?

Exercise 14 Applicant for a job have to pass two tough test papers. 70% of the people fail the first paper test.



a) Complete the tree to show the probabilities of all four outcomes.

b) What is the probability that the applicant pass both tests and gets a job.