Some interesting probability stories

Problem of Points

- ▶ Two gamblers (*A* and *B*) are flipping a fair coin.
- ▶ Heads gives *A* a point; tails gives *B* a point.
- ▶ The first gambler to get 3 points wins the $100 pot.
- ▶ The cops come before the end: *A* has 2 points and *B* has 1 point.
- ▶ The gamblers escape with the pot, but lost the coin, so they are done playing.
- ▶ How should the pot be fairly split?

This problem has historical importance.

- ▶ The earliest known statement of this problem is from Luca Pacioli in **1494**.
- ▶ Luca gave the wrong answer.
- ▶ Pascal and Fermat finally got the correct answer is **1662**. In doing so, they clearly defined many concepts of probability.