

Answers

1. The repeat number indicates how many tosses will be simulated.



- 2. A 0 is used to represent heads and a 1 to represent tails.
- 3. To toss the coins faster, change the wait time to less than 0.5 s.
- 4. The finished code for the subprogram calculateExperimentalProbability should look like this:

define	e calculateExperimentalProbability
set	experimentalProbability-HH to HH / totalTosses
set	experimentalProbability-TT to TT / totalTosses
set	experimentalProbability-HTorTH - to HTorTH / totalTosses

5. The experimental probabilities will vary but will likely be reasonably close to the theoretical probabilities,

which are HH: $\frac{1}{4}$, TT: $\frac{1}{4}$, HT or TH: $\frac{1}{2}$.

6. The experimental probabilities for 1 000 000 trials are closer to the theoretical probabilities than the results for 10 trials. When you have only 10 trials, getting the same outcome a few times in a row can have a big effect on the probabilities. Usually, the more trials we simulate, the closer the experimental probabilities get to the theoretical probabilities.