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## Algebra <br> Unit 3 Line Master 8g <br> Answers

1. The repeat number indicates how many tosses will be simulated.
when this sprite clicked
repeat
10
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 calculateExperimentalProbability
set | experimentalProbability-HH - to $\left.^{( } \mathrm{HH}\right) /$ 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: $\frac{1}{4}, \mathrm{TT}: \frac{1}{4}, \mathrm{HT}$ or TH: $\frac{1}{2}$.
6. The experimental probabilities for 1000000 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.
