Answers

**Algebra**

**Unit 3 Line Master 9e**

**Challenge 1: Obtaining Input from the User**

As described in the hint, add a block that asks the user how

many trials they would like to simulate. Use the answer to set

the number of repeats.



**Challenge 2: Simulating an Unfair Coin**

Alter the code as described in the hint.



For a large number of trials, the experimental probabilities

should approach HH: , TT: or , HT or TH: +=or

 Answers (cont’d)

**Algebra**

**Unit 3 Line Master 9f**

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To simulate an unfair coin that has a probability of landing

heads, change the **pick random** range for the **firstCoin** variable to include four possibilities (0 to 3).



For a large number of trials, the experimental probabilities

should approach HH: , TT: , HT or TH: +=, or

 Answers (cont’d)

**Algebra**

**Unit 3 Line Master 9g**

**Challenge 3: Considering HT and TH as Separate Outcomes**

New variables should be created for HT, TH, experimentalProbability-HT, and experimentalProbability-TH. Four of the subprograms need to be altered as shown below to reflect the fact that HT and TH are no longer treated as the
same outcome.

The reset subprogram: The subprogram calculating the

 probabilities:



 Answers (cont’d)

**Algebra**

**Unit 3 Line Master 9h**

The subprograms called **firstTossHeads** and **firstTossTails**:



The theoretical probabilities are HH: , HT: , TH: , TT: ;

for a large number of trials, the experimental probabilities should approach these numbers. Here is a sample result for 1000 trials:

