Recap

- conditionals (if, if-else)
- variables
- user input (ask and wait, answer)
- reporter blocks
- number guessing game

What does this script say?

A. true

B. false

C. inCalifornia

What best describes what this reports?

A. true if both a and b are odd

B. true if both a and b are even

C. true if exactly one of a or b is odd

Preview

- specifying parameter types
  - only spend a minute or two trying to figure out the question on the first page
- breaking a big problem into smaller pieces
  - I didn't use their TTT code in my solution
  - pay attention to the advice about working it out on paper
- debugging with the "check" block (if-do-and-pause)
- abstraction and problem decomposition – brick wall

Simulating a Coin Toss

Problem: What is the probability that you can toss some number, n, heads in a row?

Pseudocode:


```
Input the number of heads in a row for a trial.
Input the number of trials.
Perform the specified number of trials.
Print the result.
```
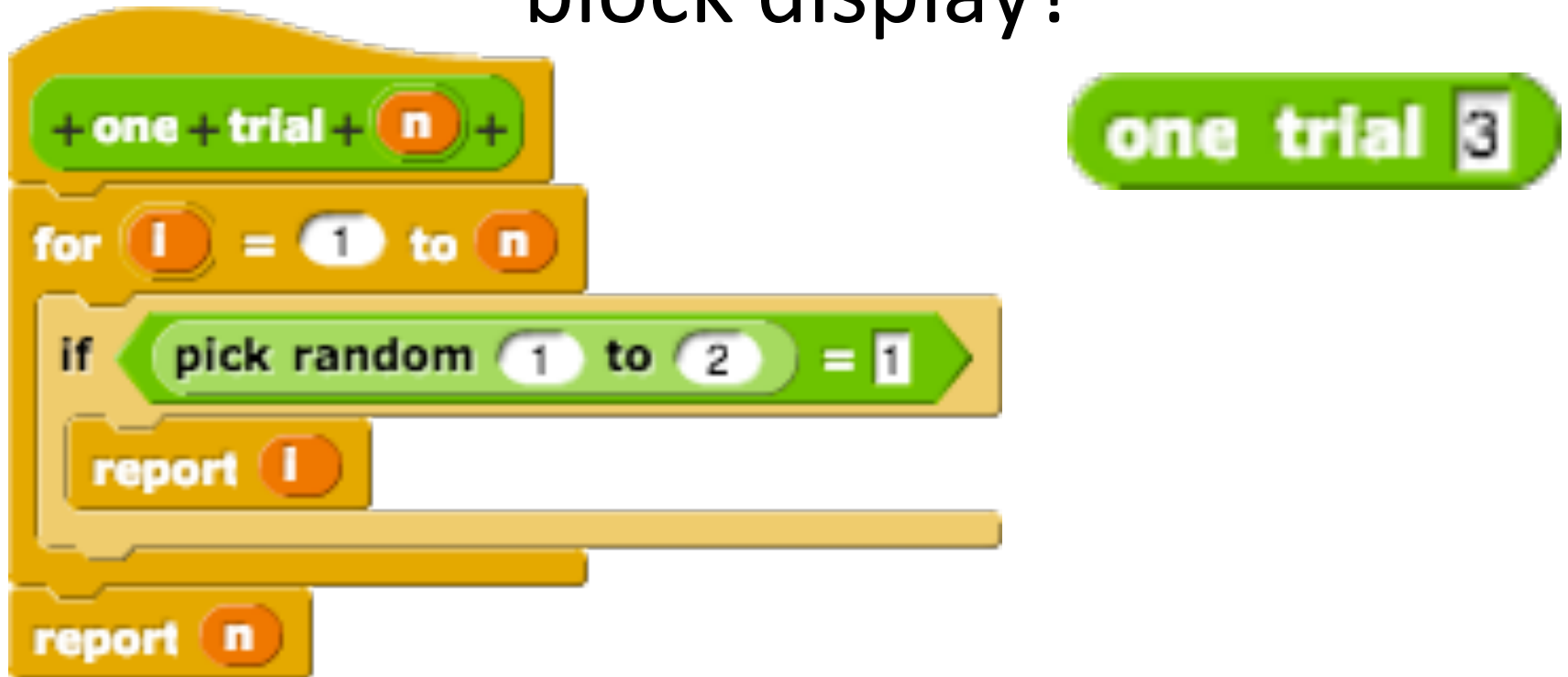
Pseudocode for performing the n trials:

```
initialize the number of successes to 0
while there are more trials to run
    run one trial
    if the trial was a success
        increment the number of successes
end while loop
return the number of successful trials
```

Pseudocode for performing one trial:

```
let numTosses be the number of tosses for
                                a successful trial
initialize the number of heads tossed to zero
while number of heads tossed is less than numTosses
   toss the coin
   if the coin comes up tails
      return failure
   increment the number of heads tossed
end while loop
return success
```

What does clicking on the "one trial" block display?

A. always 3

B. sometimes 1, sometimes 2, and sometimes 3

C. any combination of 1, 2, and 3 on each click