CSCI 1106
Lecture 9b
Random
A Random Aside

• Idea: Most systems have a pseudorandom source of values
  – The source is an infinite sequence of values
  – The values look random
  – Are sufficiently random for our purposes

• Each system is a little different, but all work similarly
  – Each system provides a Random function
  – The function returns a value chosen randomly from a fixed range
in Scratch

- Scratch has a `pick random 1 to 10` function
- Returns a value in the range $\min \leq n \leq \max$
- Value is selected at random from a *uniform distribution*
- What does a uniform distribution mean?

![Uniform Distribution Diagram](chart)
A Random Code Example

• If you wanted to implement a coin toss, how would you do it?
Another Random Example

• How do we place an object at a random horizontal position on the stage?
  
y = 50;
  
x = ???

```plaintext
set y to 50
set x to pick random -240 to 240
```

-240                           240
-240                           240

min value                       max value

(177,50)
Fire away!