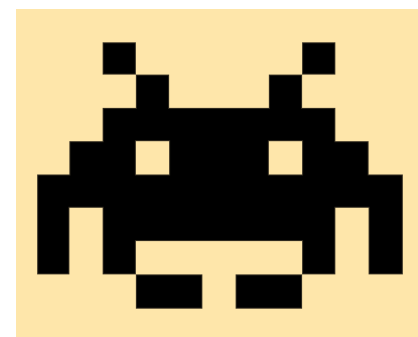




CSCI 1106

Lecture 9b



Random

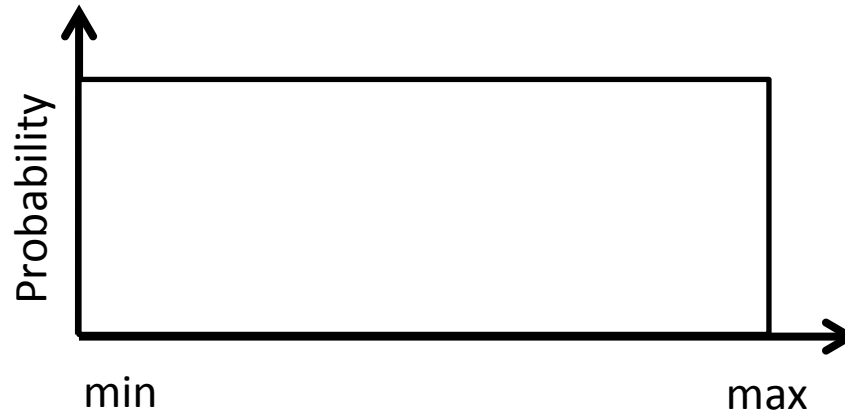


A Random Aside

- 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

pick random 1 to 10 in Scratch

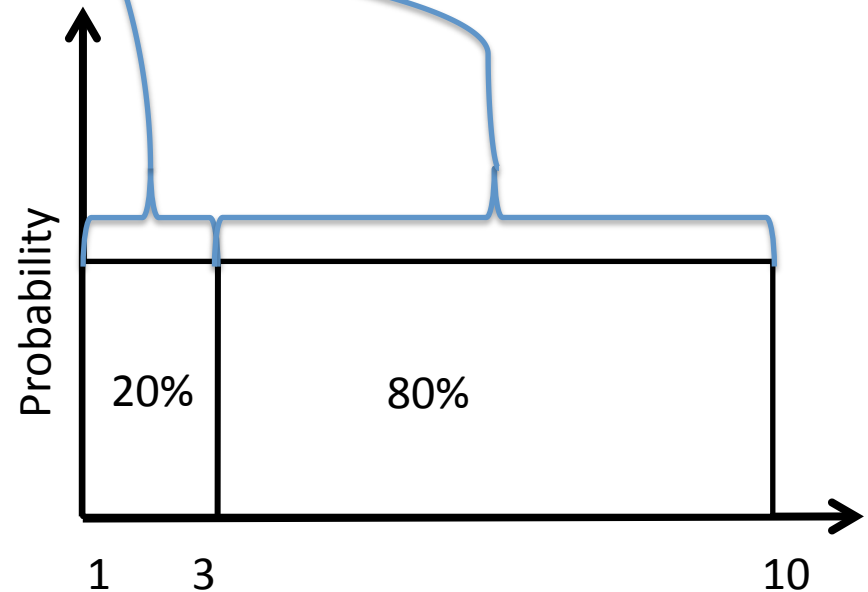
- Scratch has a `pick random 1 to 10` function
- Returns a value in the range $\text{min} \leq n \leq \text{max}$
- Value is selected at random from a *uniform distribution*
- What does a uniform distribution mean?



A Random Code Example

```
if pick random 1 to 10 < 3 then
else
```

- If you wanted to implement a coin toss, how would you do it?

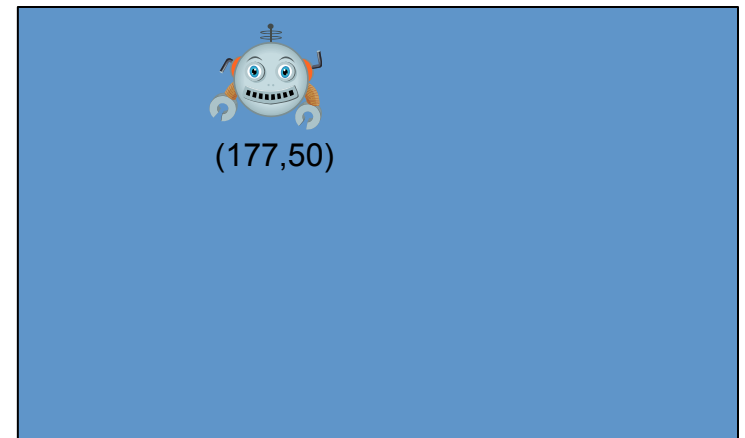


Another Random Example

- How do we place an object at a random horizontal position on the stage?

$y = 50;$

$x = ???$



-240

240



min value

max value

Fire away!