Simulation with Core Math Tools

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Buzz Hub Presentation
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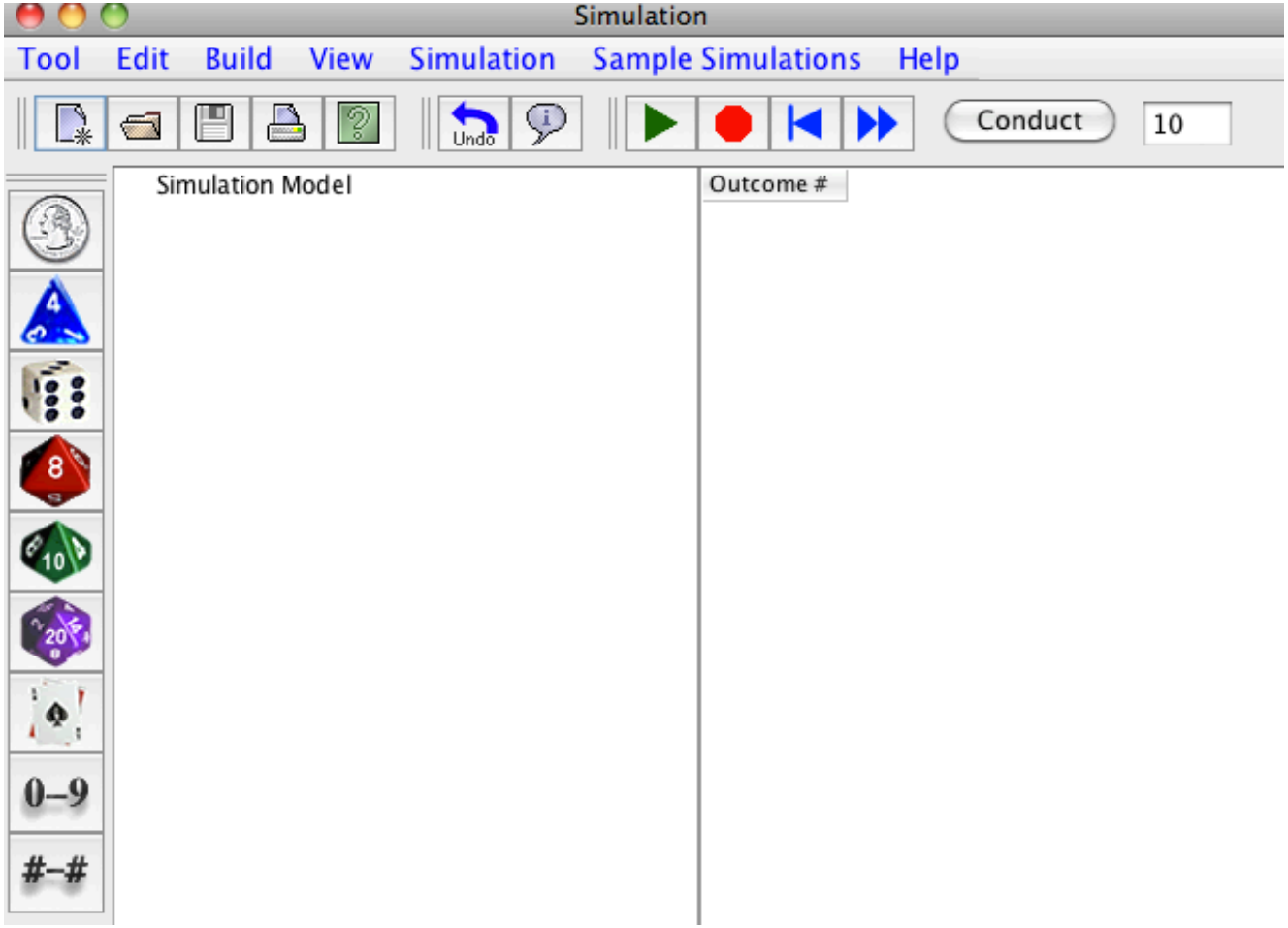
Simulation Tool

Simulation


Simulation
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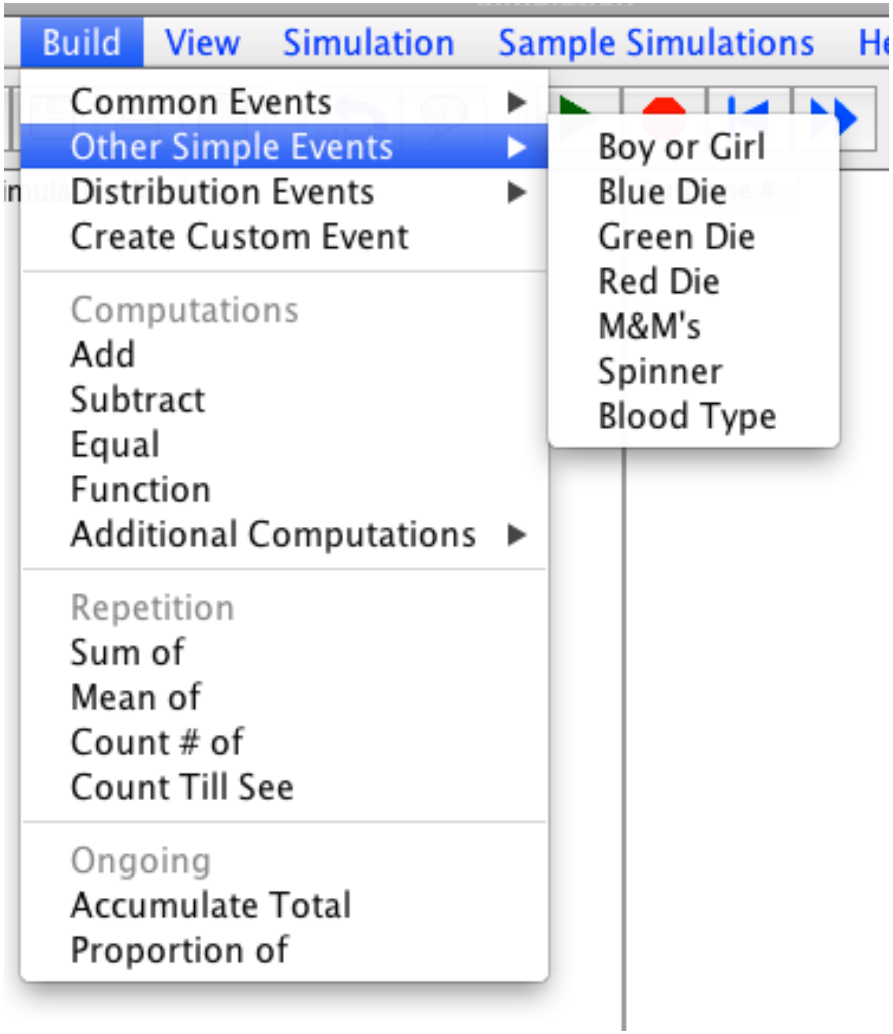
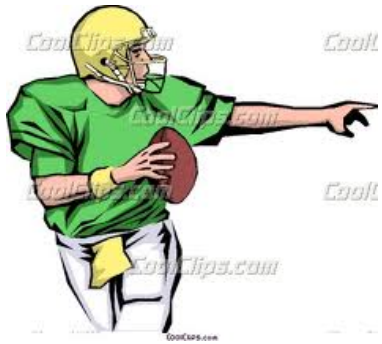
Simulation Model
Outcome #
0–9
#–#

Simulation menus

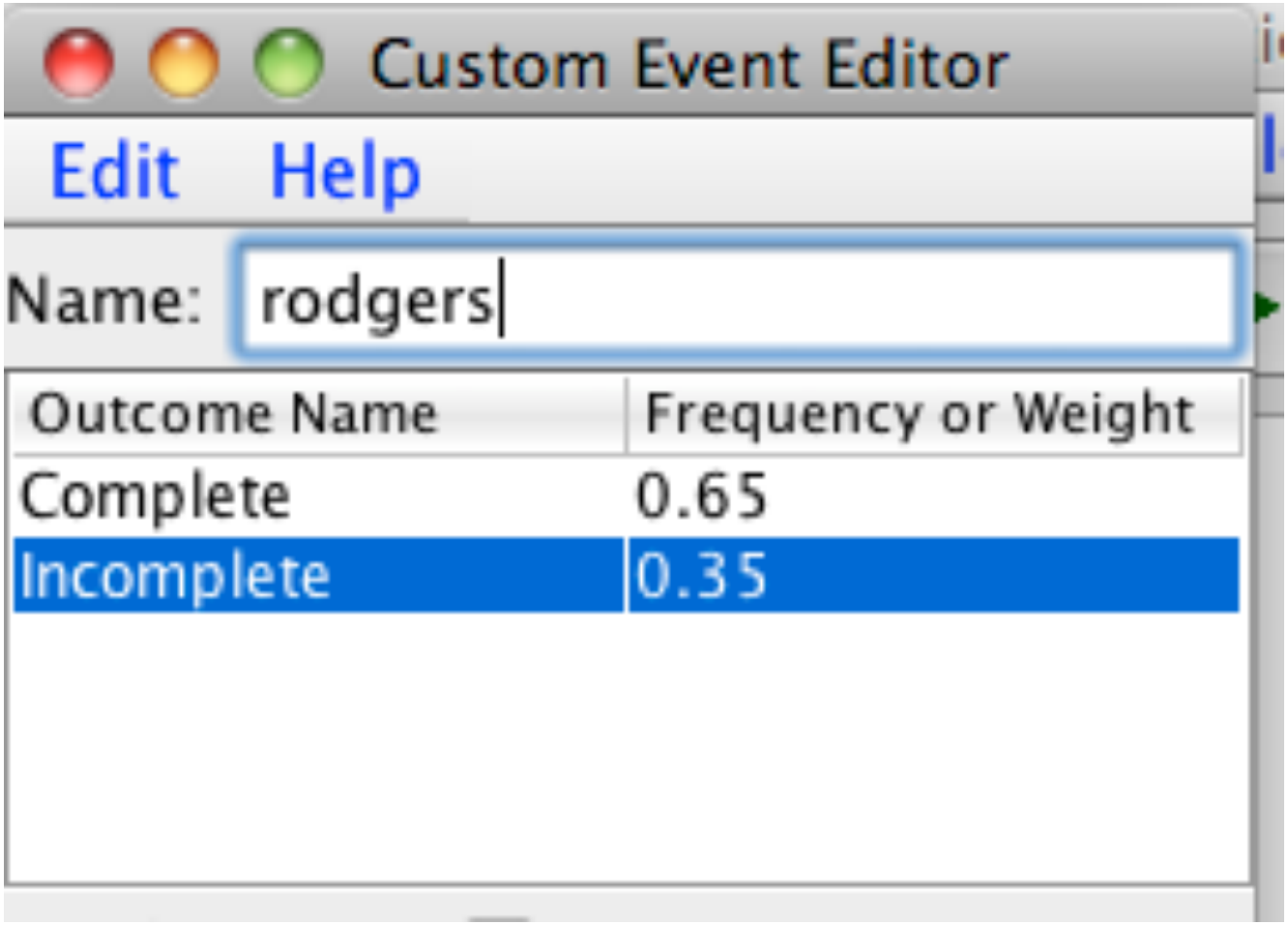


Example

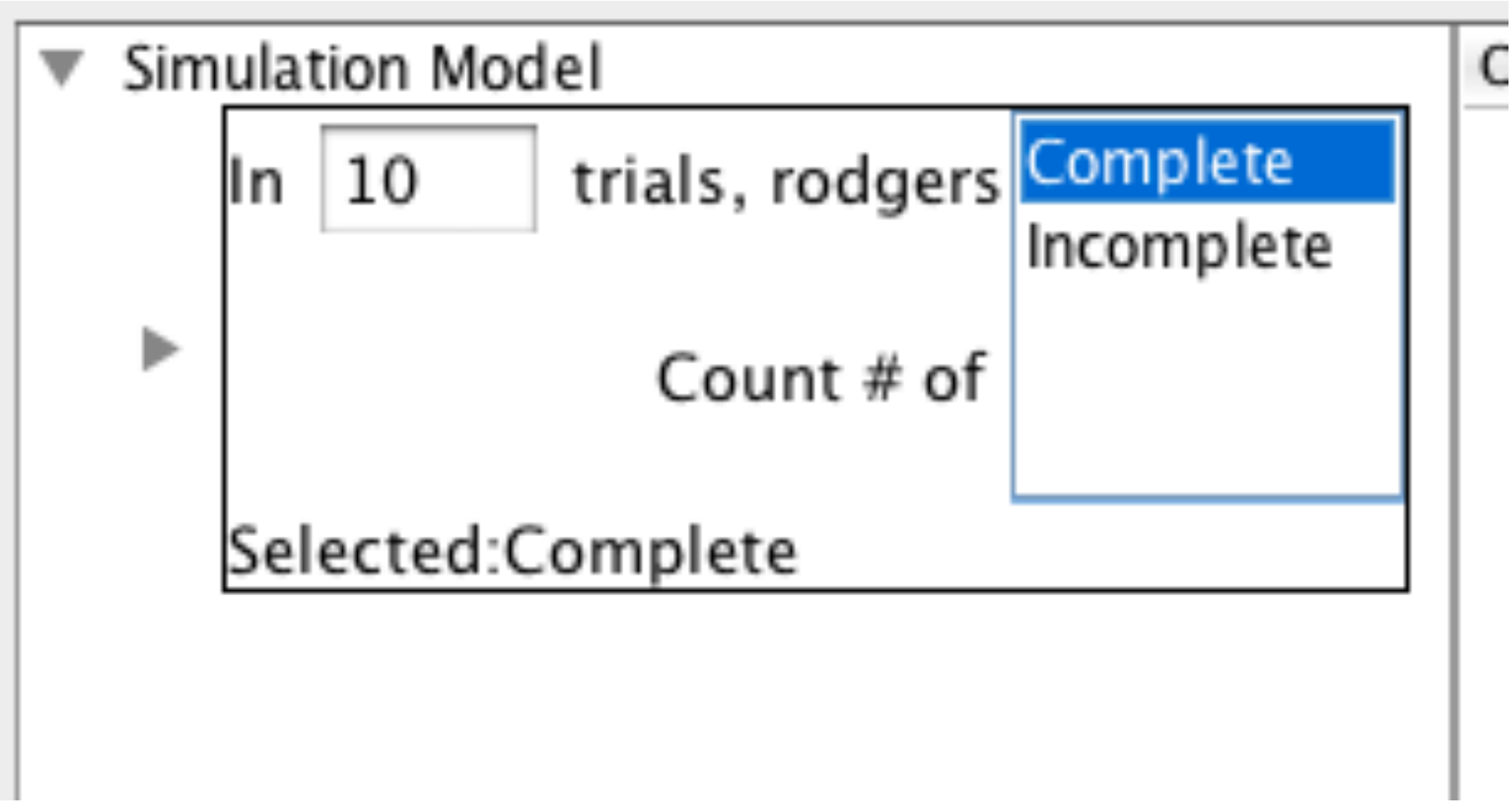
Aaron Rodgers – QB for Green Bay Packers completes about 65% of passes that he throws. Suppose he makes 10 passes in a game. Estimate the probability that he completes at least 7 of the 10 passes.



Custom Event Editor



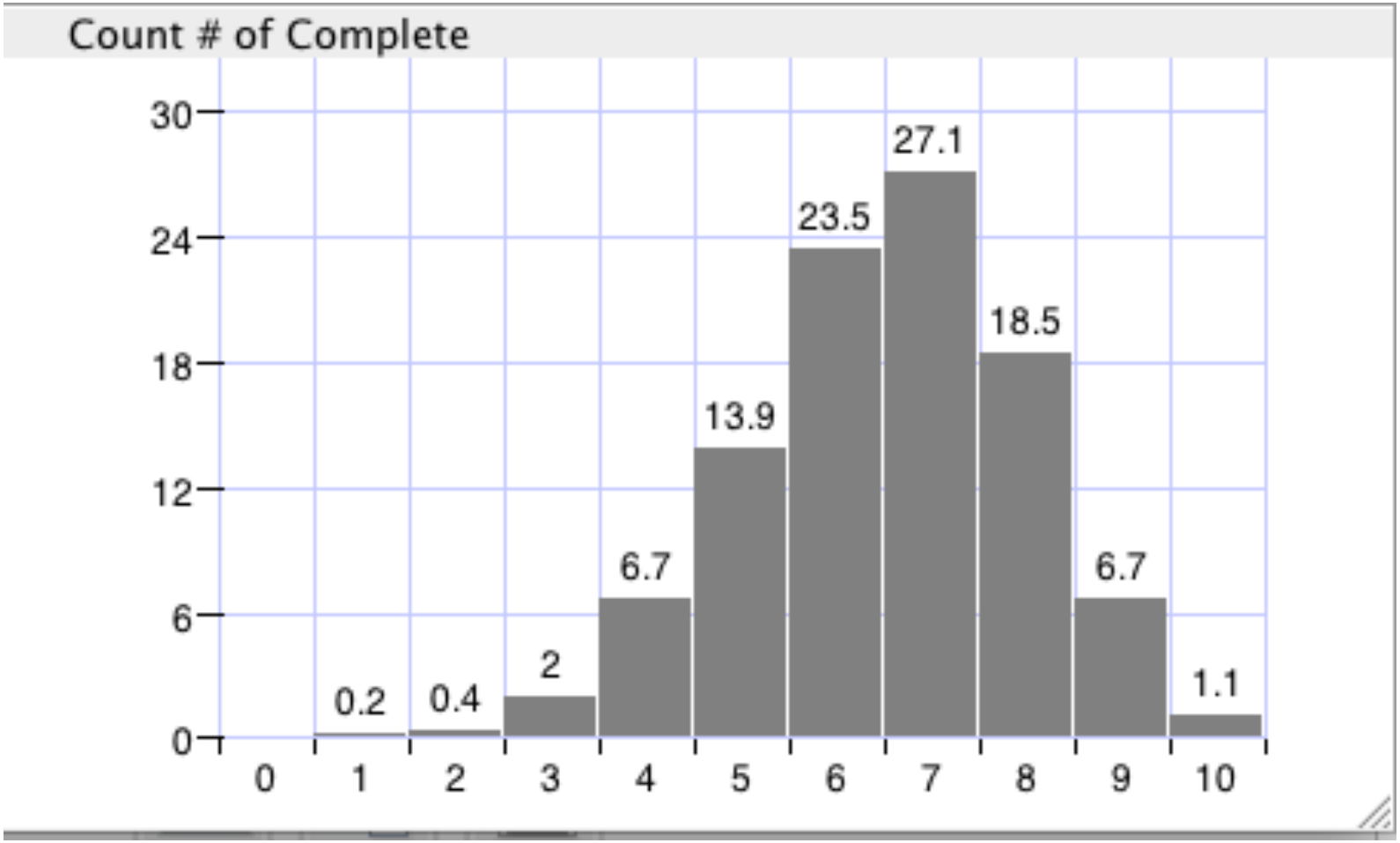
Count number of successes



Conduct the Simulation

Outcome #	rodgers	Count # of Complete
1	Complete	6
2	Incomplete	
3	Complete	
4	Complete	
5	Incomplete	
6	Complete	
7	Incomplete	
8	Complete	
9	Incomplete	
10	Complete	

Repeat a large number of times

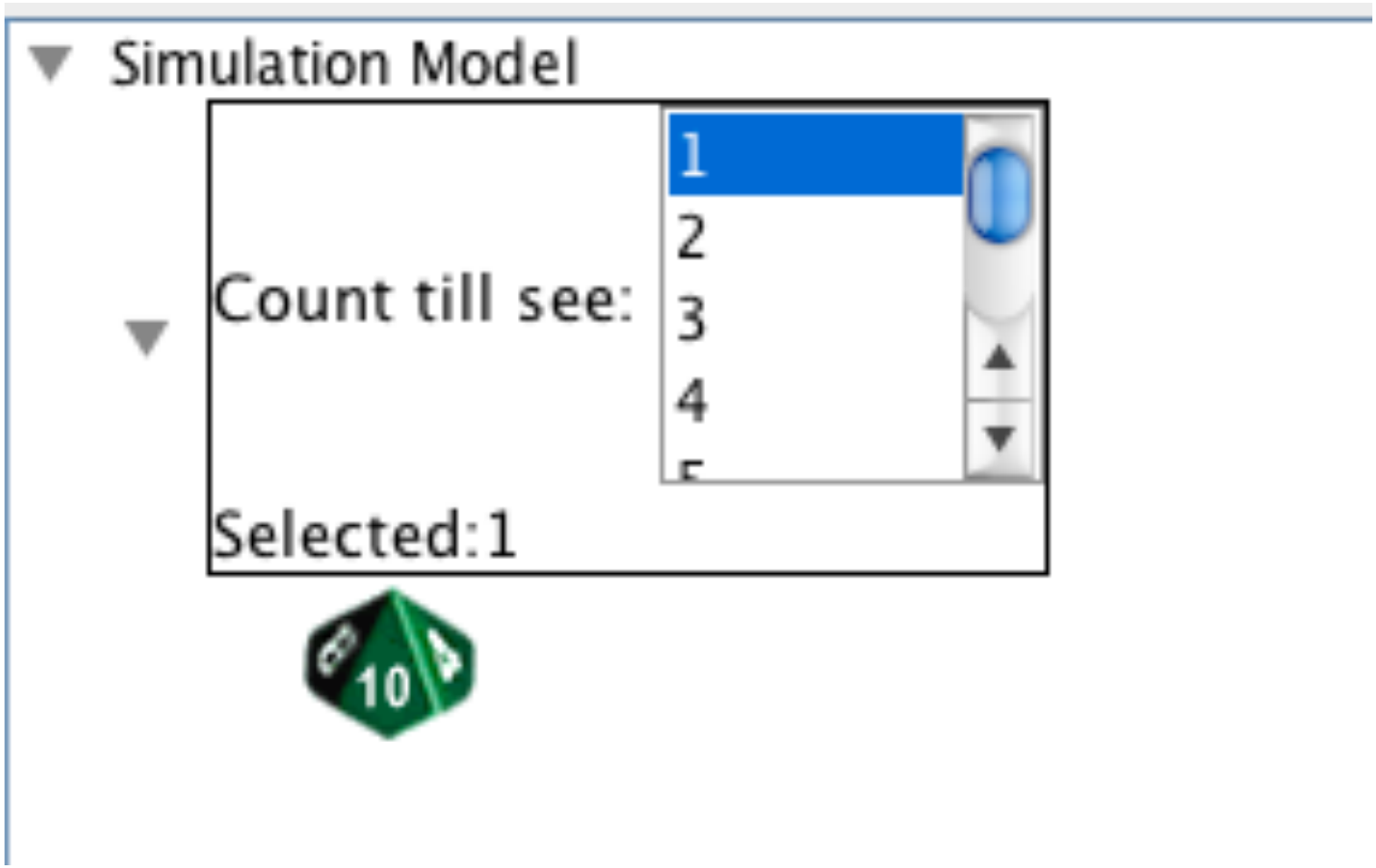


Donating Blood

In the United States, approximately 10% of the population has type B blood.

On a certain day, a blood center needs 1 donor with type B blood. How many donors, on average, should they have to see in order to obtain exactly 1 with type A blood?

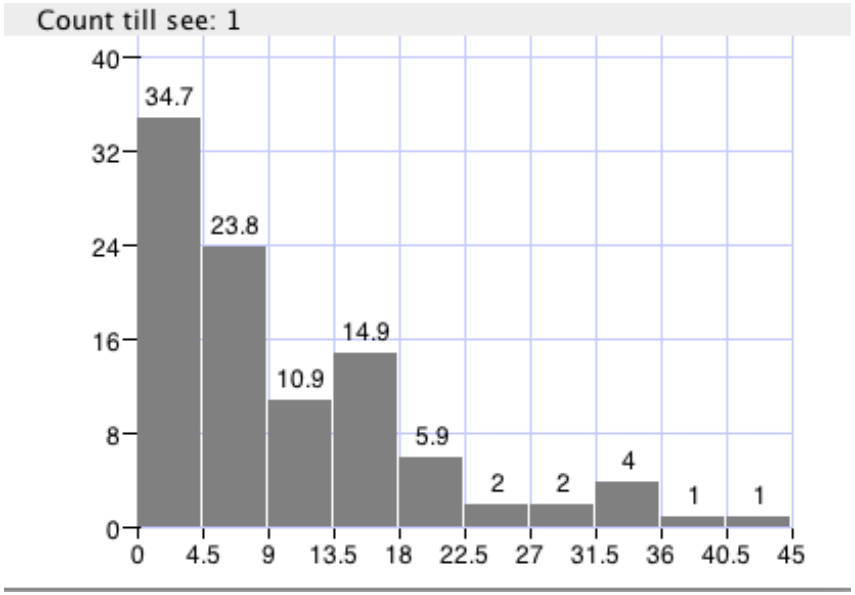
Setting Up the Simulation



One Trial

Outcome #	10-sided Die	Count till see: 1
1	10	19
2	7	
3	7	
4	3	
5	2	
6	4	
7	3	
8	2	
9	2	
10	6	
11	10	
12	2	
13	5	
14	10	
15	2	
16	8	
17	10	
18	8	
19	1	

Summary of 101 trials



Count till see: 1

n = 101
mean = 10.34
minimum = 1
q1 = 3
median = 7
q3 = 15
maximum =43
sample standard deviation = 9.33
sample variance =87.11

Core Math Tools

Download today at:

www.nctm.org/coremathtools