

h 16

w 9

Make Oval w width h height

MonteCarlo

howManyTurtles 500

On Off SeePatches

count cows
218

count houses
282

count turtles
500

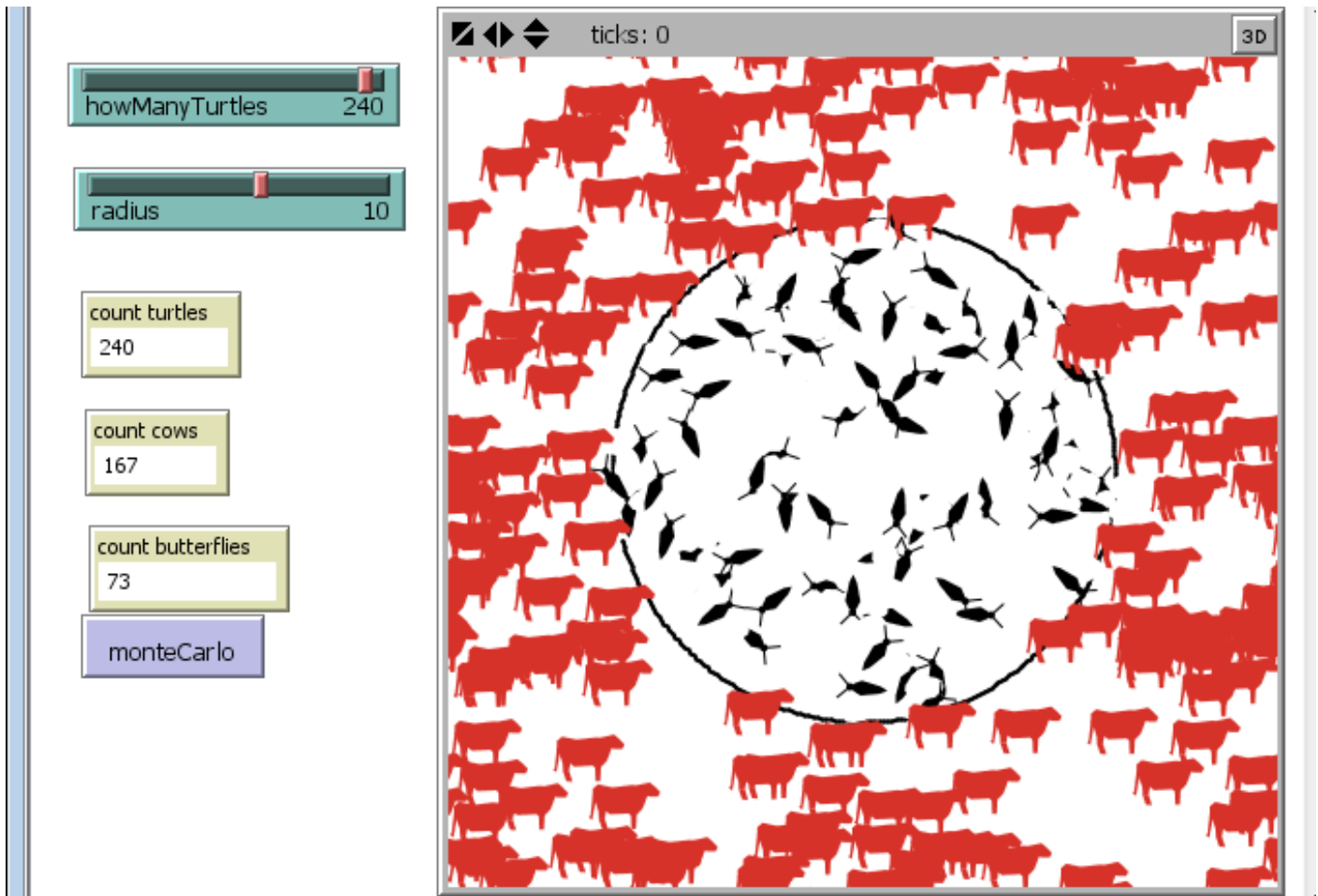
count patches
1089

1st step:
Make w by h
Ellipse

2nd step:
MonteCarlo
button
to get data for
an area estimate
of the oval.

ticks: 0 3D

1. Calculate the **Monte Carlo estimated area** of the above OVAL using what you have learned. **Be sure to show ALL of your work**, including the NUMERATOR and DENOMINATOR and the setup of any equation so that you not only demonstrate you understand the concept and relationships and equation, but so that if you make arithmetic errors in the calculations, you can still get most or all of the credit. COWS are inside the OVAL, and HOUSES are outside the OVAL. **VIP: Show ALL your work. Work it out on scratch paper first, then neatly show your organized step by step solution to the problem here.**



2. **Calculate the AREA of the entire turtle grid world in square patches. Show ALL your work**, i.e. the numerator and denominator and the setup of your equation, to not only show your understanding of the concepts, but to get most or all of the credit if you make an arithmetic error in the calculations. Note that the radius of the circle is 10! **Area of the circle formula is $AREA = \pi \text{ times Radius Squared}$. Radius is 10!** Use π as 3.14 is accurate enough for π . **VIP: Show ALL your work. Work on scratch paper first, then neatly show your organized step by step solution to the problem here. Butterflies are INSIDE the CIRCLE and COWS are outside the circle.**