



Click on the SETTINGS button. The X-AXIS goes from -16 to 16. The Y-AXIS goes from -16 to 16. So the area of the entire turtle grid is $33 * 33 = 1089$ patches. The area is 33 squared or 1,089 units, which we call PATCHES in NetLogo.

Using Monte Carlo, determine the estimated AREA of the above circle. What is given? 66 and 134 and 200 are the numbers that are given. Also, 1089 is another given from multiplying the 33 rows and 33 columns to get 1,089 square patches as the AREA.

What is the GOAL, the UNKNOWN, the RESULT you are trying to determine or discover or find out? That is the AREA of the circle.

See http://www.cs.uni.edu/~jacobson/025/f/MonteCarlo11_14_2012.pdf and study AAA, BBB, CCC and DDD carefully in order to solve the problem. You know b, c, and d. You are trying to find a. See the formula. The formula is the way to get from the given input or known facts to the goal, the desired output or answer.



Find...



Check

Procedures ▾

☒ Indent automatically

```
breed [ cats cat ]
breed [ cows cow ]

TO darts
  ca
  ask patches [ set pcolor white ]

  cro 1
  ask turtles
  [
    pd
    fd 10
    rt 90

    repeat 180
    [
      fd (2 * 3.14159265 * 10) / 180
      rt 2
      wait 0.02
    ]
    die
  ]

  cro howManyTurtles
  ask turtles
  [
    setxy random-xcor random-ycor

    ifelse sqrt ( xcor * xcor + ycor * ycor ) < 10
    [
      hatch-cows 1 [ set color blue set shape "cow" ]
    ]
    [
      hatch-cats 1 [ set color red set shape "cat" ]
    ]

    die
  ]
END
```

Model Settings

World

Location of origin: Center

min-pxcor -16
minimum x coordinate for patches

max-pxcor 16
maximum x coordinate for patches

min-pycor -16
minimum y coordinate for patches

max-pycor 16
maximum y coordinate for patches

Torus: 33 x 33

☒ World wraps horizontally

☒ World wraps vertically

View

Patch size 13
measured in pixels

Font size 10
of labels on agents

Frame rate 30
Frames per second at normal speed

Tick counter

☒ Show tick counter

Tick counter label ticks

OK Apply Cancel

Torus 33 by 33 with max-pxor of 16 and max-pycor of 16.

$33^2 = 1,089$... and the world wraps!