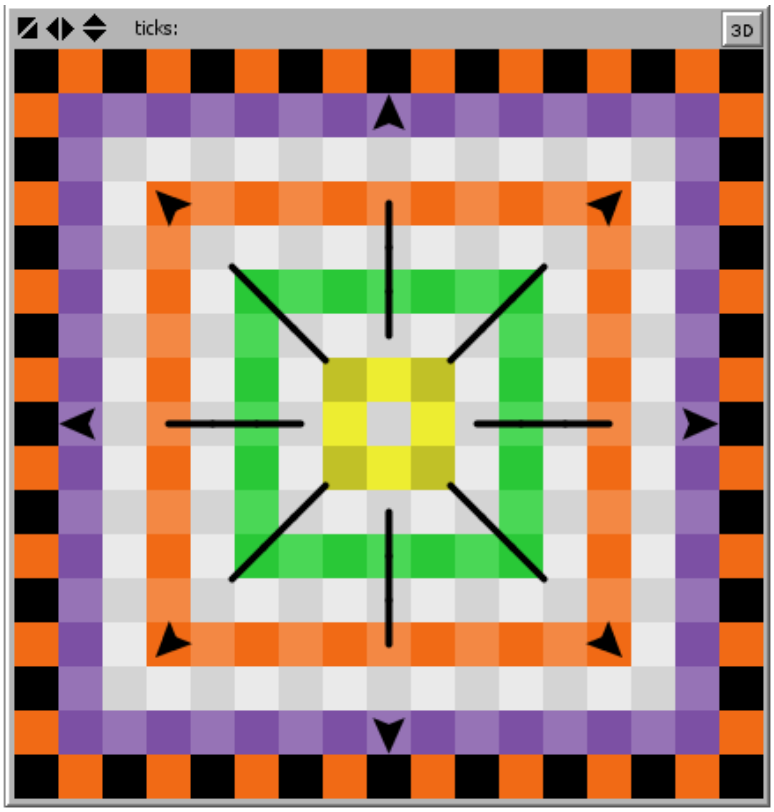
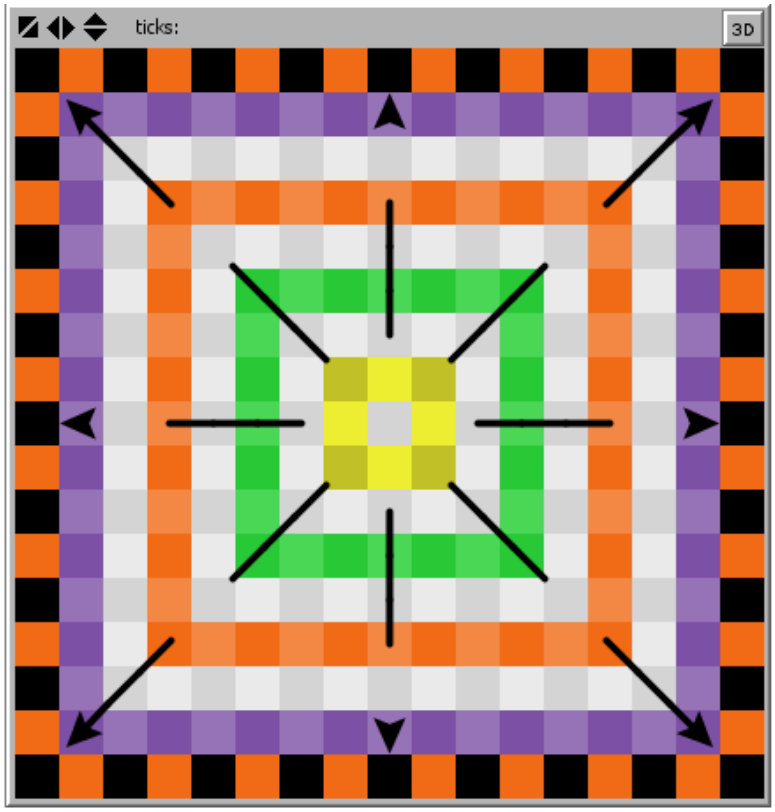
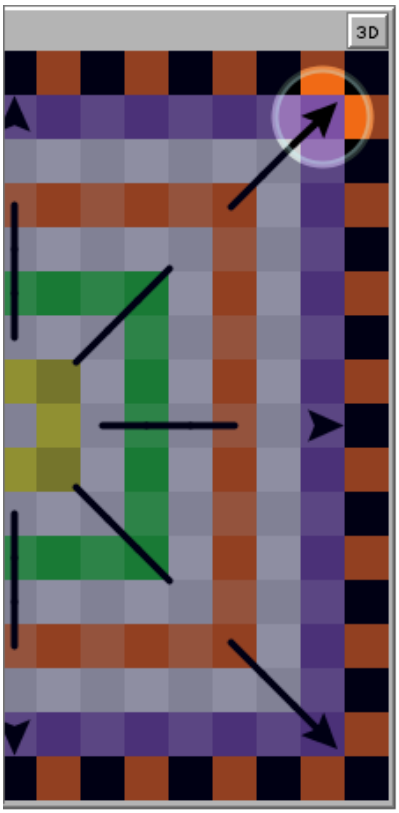


The ODD turtles pause for two seconds on the four corner **ORANGE** squares. How far did they move to reach ORANGE?

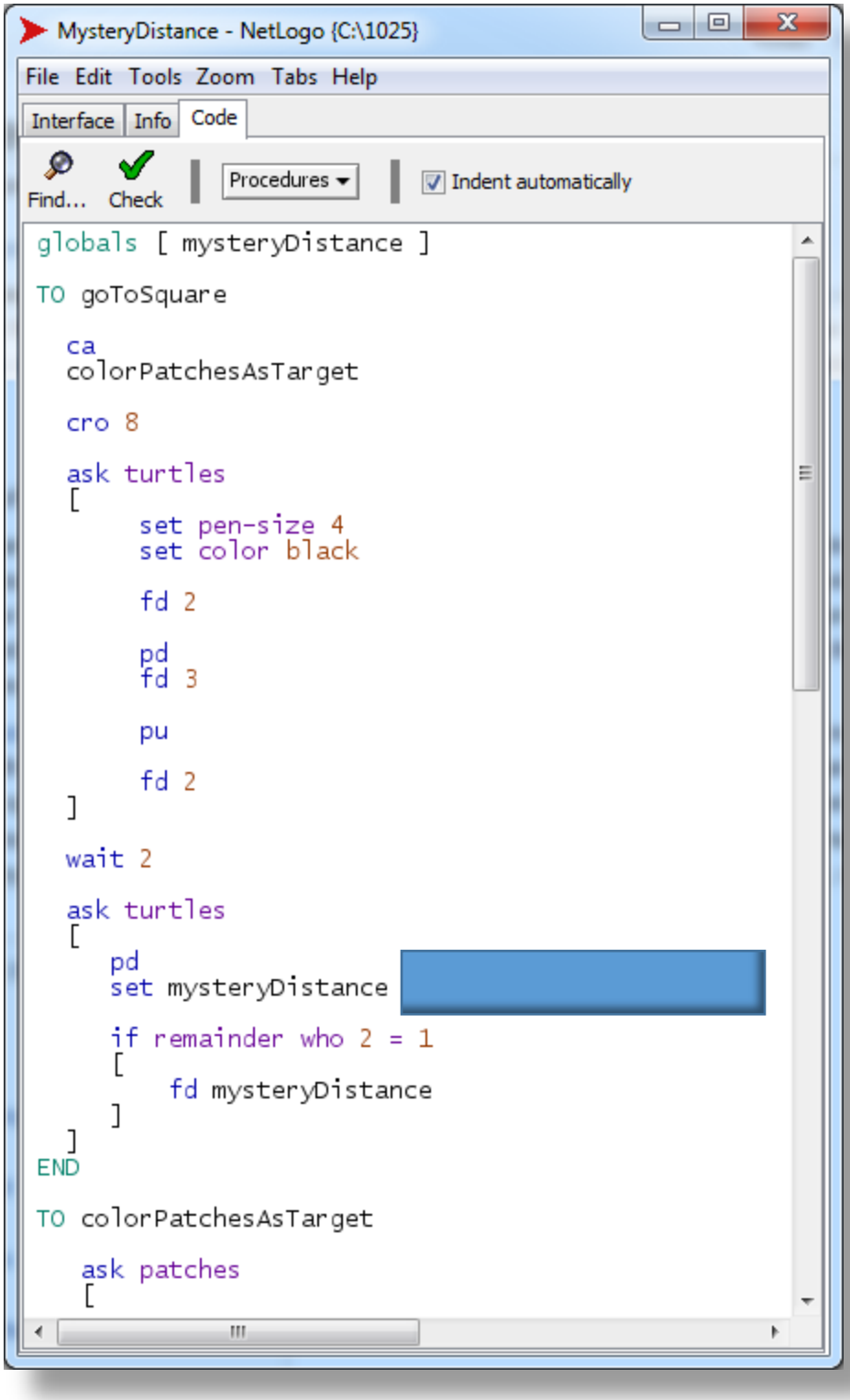
After the 2 second delay (**wait 2**), the ODD turtles 1, 3, 5 and 7 moved out the additional distance, with their pd PENS DOWN again. They are now on the FOUR CORNERs of the **PURPLE** squares. What is the total distance (from 0,0 home) they needed to travel and they have travelled **fd** forward to reach the **PURPLE** squares?





Here is the code from test one, but with the PEN-SIZE made 4 times as thick and the color of the turtles set to black. Otherwise, it is exactly the same code as the show the output of the NetLogo turtles on test #1.

Extra statements are: colorPatchesAsTarget to get the cool multiple colored patches, set pen-size 4, and set color black.



The code after the WAIT 2 is the worksheet problem. Remember to look for a right triangle so you can use your **Pythagorean theorem**.

The NetLogo code for obtaining the Square Root is **sqrt number**.

For example, **sqrt 144** would be **12**.

For another example, **fd sqrt 100** would cause turtles to move forward **10** units, since the square root of 100 is 10.

"the **Pythagorean theorem**—or **Pythagoras' theorem**—is a relation in Euclidean geometry among the three sides of a right triangle. It states that the square of the hypotenuse (the side opposite the right angle) is equal to the sum of the squares of the other two sides."

… from the Wikipedia.org/wiki link given above.

wiki/Pythagorean_theorem

a relation among the 3 sides…

keys: find a right triangle to get an angle on the problem, the right perspective. Figure out which parts are known and which you need to know.

This handout should prove **useful in helping solve 1.e.** on the **TestOneLogofall13worksheet.pdf** assignment.

See also **Test One, Page 1, question #1 show the output question** from the October 21st, 2013 midterm exam.