# Homework 1

General details about the homework. Don’t forget to use the clear-all, reset-ticks, and tick commands in your setup and go procedures.

1. setup1: spawn a single agent at patch 0 0 with heading 0. (You should be able to do this in 1 line of code. Note the default spawn location.)

go1: make the agent advance 10 patches.

1. setup2: spawn 1 turtle at each of the following coordinates: (10, 10), (-10, 10), (10, -10), (-10, -10). Set their headings so each one points to patch 0 0.

go2: this should move each of the four above turtles directly towards the origin (patch 0 0). They should meet exactly at the origin after ten executions of this procedure.

1. setup3: spawn 20 turtles with random positions and headings. Set their colors as a blue gradient to scale with their y-coordinates (see scale-color).

go3: change the color of the patch each turtle is on to a shade of yellow in a gradient to scale with the patch's x-coordinate. Move the turtle forward 3.

1. setup4: choose num-colored-patches many patches at random and set their color to green. Create num-turtles turtles at random starting locations.

go4: ask all turtles to move forward 1. Then if they are standing on a green patch, they should set a new random decimal heading between 0 and 360 and the patch should change to blue.

1. setup5:

go5:

1. *Bonus Question:* setup6: create num-turtles many turtles

go6: