2. Looking at a few of the random walkers, I can see no discernible pattern in how the walkers move in the x and y plane. This is what we expect given the function generating the random values is well written. Also, referring to rand_walk.pdf, each walker begins in the same location, but then diverges from the point (0,0), with some moving away from the origin more rapidly than others. However, each walker appears to move a similar distance from the origin.

3. Each walker should not end up the same distance from the origin, however, thee distance each walker travels should be somewhat similar.

4. Looking at the actual distances each walker travels from the origin, we see there is a distribution in how far the walker travels. In general, most travel ~10 units from the origin, with some walkers traveling a bit further or shorter. This is as expected.

5. Looking at walker_hist.pdf, we see most of the walkers travel a distance within a standard deviation (light blue) of the median (purple) distance travelled. It also appears the distances travelled by the walkers have an approximately gaussian distribution. I think this makes sense with a random function because not every number in the random function has the same probability of being generated. If there was a uniform probability each value was picked, then the values wouldn't be random.

6. Random walkers may be useful in describing how a particle moves in a thermal system. I.e. it could show how the particle moves given its mean free path/the rate of collision with other particles.

7. If we look at how the distances travelled by the walkers changes when expanded to 3D space, we see the mean distance travelled by the walkers is slightly higher (though this may be from random chance), and that there is a wider distribution in the distance travelled. It appears the histogram for the 3-dimensional distance is a better gaussian approximation than the 2-dimensional case.