

MATH 1000 IN-CLASS ACTIVITY 2

WEDNESDAY, JANUARY 17

Instructor: Alex Rice

Name:

These discussion topics were inspired by the Chapter 1 of *How Not to Be Wrong* by Jordan Ellenberg, titled “Less Like Sweden”.

For each of the following pairs of quantities, determine if the relationship between the two is likely to be *linear* or *nonlinear*. Explain the reasoning behind your choice. Finally, sketch a curve that you think roughly models the relationship between the two quantities.

(1) Life expectancy as a function of daily average caloric intake:

(2) Speed of a free-falling object as a function of time (neglecting air resistance):

(3) “Quality of life” as a function of annual income:

(4) Global Population as a function of time:

(5) Average gas mileage as a function of speed: