

Math 1180: Regression Assignment
Due on April 24

Consider the following data.

id	size	survive one year?	time of death
1	2.0	Yes	2.5 years
2	1.0	No	0.5 years
3	3.0	Yes	1.5 years
4	2.0	No	0.25 years
5	2.5	Yes	3.0 years
6	1.5	Yes	2.0 years

- a. Graph the data describing whether individuals survive, and sketch a logistic curve through it.
- b. Suppose that individuals have a constant rate of death. Write the likelihood function for that rate assuming that size has no effect on survival.
- c. Extend this likelihood function to include the effects of size.