ISLR 4.7 Conceptual Problem 6 (page 191) [201 in pdf]

Suppose we collect data for a group of students in a statistics class with variables X1 = hours studied, X2 = undergrad GPA, and Y = receive an A. We fit a logistic regression and produce estimated coefficient, βˆ0 = −6, βˆ1 = 0.05, βˆ2 = 1.

1. Estimate the probability that a student who studies for 40 h and has an undergrad GPA of 3.5 gets an A in the class.

P(A) = = **37.75% chance to get an an A**

1. How many hours would the student in part (a) need to study to have a 50 % chance of getting an A in the class?

Solve for X1 on graphing calculator:

0.5 =

X1 **50 hours** to have a 50% chance to get an A