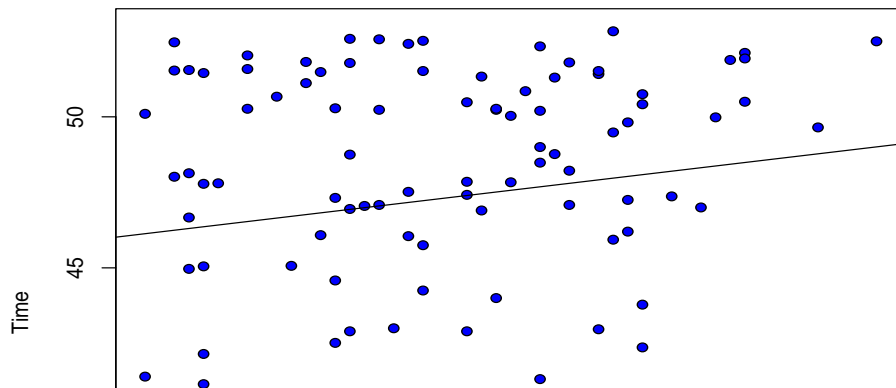


Stat 185 - A regression problem

1. The figure below shows a scatter plot of 10K race time (in minutes) vs age for a random sample 100 racers in the Peachtree Road Race and the table shows linear regression table for that same data. We are curious if there is a relationship between race time and age.



	Estimate	Std. Error	t value	Pr(> t)
(Intercept)	15.3179	12.1447	1.261	0.210
height	0.3763	0.2556	1.472	0.144

- (a) Write down the hypothesis statement that we would check with this linear model.
- (b) Write out the formula for linear model.
- (c) What does the model predict for the race time of a runner who is 30 years old?
- (d) State the conclusion of the hypothesis test from part (a).