Quiz 11
Week of April 20, 1998

A regression of `mileage` (the response variable) on three predictors `Deurope` (=1 if car is European, =0 if not), `Djapan` (=1 if car is Japanese, =0 if not), and `weight` (in pounds) yielded the following regression for a sample of 27 (13 Japanese, 6 US, and 8 European) 1980 model year cars :

	Coef	**StDev**	**t-ratio**	**p**
`Intercept`	49.28	7.58	6.50	0.0000
`Deurope`	7.29	2.84	2.57	0.0053
`Djapan`	4.85	2.77	1.76	0.0925
`weight`	-0.008	0.0026	-3.14	0.0046

1) What is the equation of the estimated regression line?

2) On the basis of this analysis, what do you estimate the mileage of a typical 2500 pound 1980 model year Japanese car to be?

3) Other things being equal, how much higher (or lower) than for U.S. cars is the average `mileage` of Japanese cars?

4) Other things being equal, how much higher (or lower) than for 2000 pound cars is the average `mileage` of 3000 pound cars?

5) Controlling for `weight`, is there a statistically discernible difference between US and European made cars (at the $\alpha = 5\%$ level)? Why/why not?