Population sizes of the annual plant, *Lithophragma falsus*, have been decreasing at the southern edge of the species' geographic range. These decreases in population size are thought to be caused by increased temperature and decreased precipitation tied to global climate change. In an effort to evaluate whether natural selection has the potential to mitigate the negative impact of climate change on this species by driving rapid adaptation to novel environmental conditions, a study of phenotypic selection was conducted. Specifically, 499 individual plants growing in one of the threatened populations were marked as seedlings at the beginning of the year. For each of these 499 seedlings, three traits were measured during the growing season: 1) Leaf pubescence (average number of hairs per mm^2), 2) Transpiration rate (ml/day), and 3) Date of first flower (days past January 1). At the end of the growing season, the number of seeds produced by each plant was recorded. Data on traits and absolute fitness is available in the file "MultivariateSelectionDataSet.csv". Use this data to evaluate the hypothesis that adaptation to climate change results primarily from selection for increased levels of leaf pubescence and decreased rates of transpiration and not from selection for early flowering.

A. To start, estimate the selection gradient acting on each trait using simple linear regression (i.e., ignoring available information on the other traits). Which traits does this simple analysis suggest are the targets of selection?

B. Next, estimate the selection gradients acting on each trait using multiple regression (i.e., using the information available on the other traits). Which traits does this more complex analysis suggest are the targets of selection?

C. Why do your results differ between A and B?