

Problem 1.

Solution. The result is as follows:

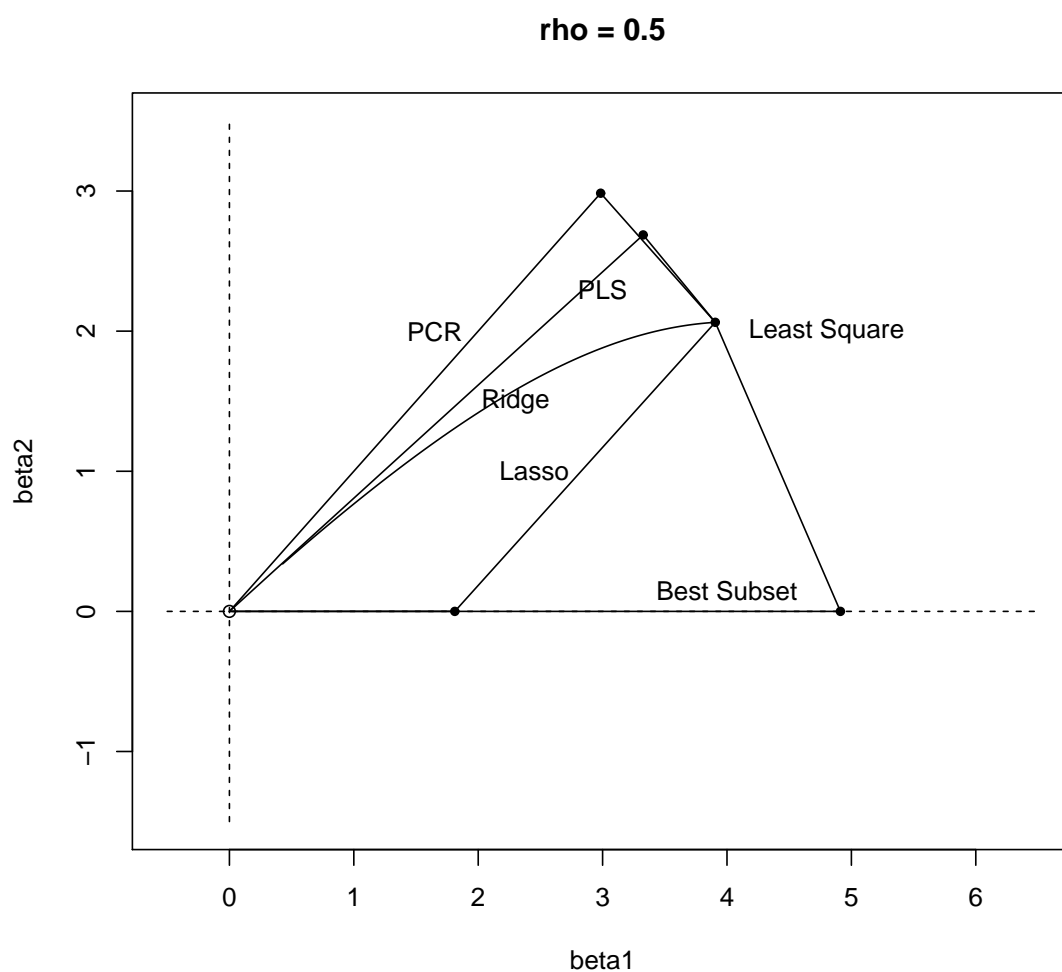


Figure 1: The graph of parameters' increasing.

It is the same as the graph in the lecture notes.

Problem 2.

Solution. The result is as follows:

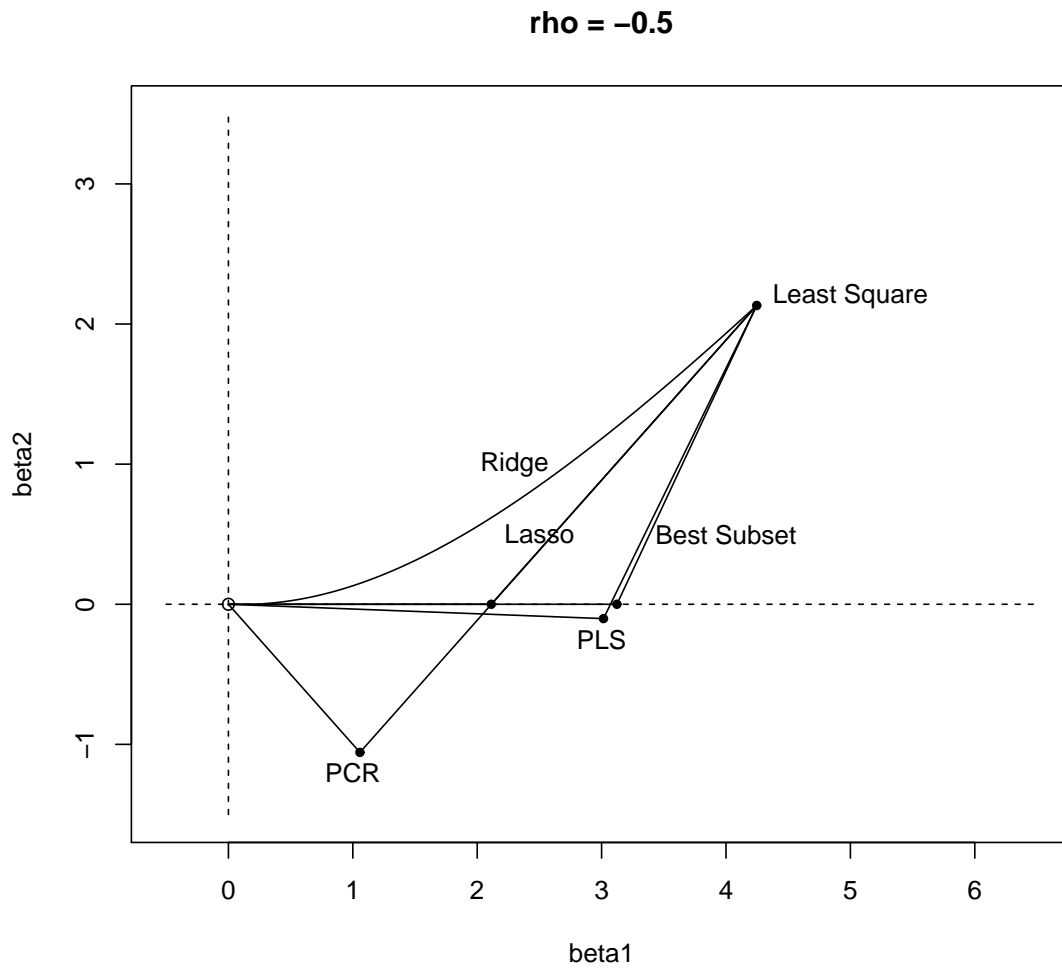


Figure 2: The graph of parameters' increasing.

The point of PLS when $k = 1$ is different with that in the lecture notes. It might be caused by the kind of norm chosen at the first step of PLS.

Problem 3-5.

Solution. Because there's little time left before the DDL, I would later submit the solution of these problem to TA by email.