

```

X20 = randn(50,30);
ww20 = [0; 2; 0; -3; 0; -4; 1; 0; 2; 0; 2; 3; 0; -5; 6; 0; 1; 2; 0; 10;
0; 0; 3; 4; 5; 0; 0; -6; -8; 0];
y20 = X20*ww20 + randn(50,1)*0.1 + 5;

```

Running our program with $K = 0.01$ and $K = 0.99$, and then with $K = 0.99$ and $K = 0.01$, we get the following weight vectors (in the left column is the weight vector corresponding to $K = 0.01$ and $K = 0.99$):

0.0254	0.2007
1.9193	2.0055
0.0766	0.0262
-3.0014	-2.8008
0.0512	0.0089
-3.8815	-3.7670
0.9591	0.8552
-0.0086	-0.3243
1.9576	1.9080
-0.0077	-0.1041
1.9881	2.0566
2.9223	2.8346
-0.0046	-0.0832
-4.9989	-4.8332
5.8640	5.4598
-0.0207	-0.2141
0.8285	0.8585
1.9310	1.8559
0.0046	0.0413
9.9232	9.4836
-0.0216	0.0303
0.0453	-0.0193
2.9384	3.0004
4.0525	3.9753
4.8723	4.6530
0.0767	0.1192
0.0132	-0.0203
-5.9750	-5.7537
-7.9764	-7.7594
-0.0054	0.0528

Generally, the numbers in the left column, which are more “lasso-like,” have clearer zeros and nonzero values closer to those of the weight vector $ww20$ that was used to create the data set. The value of b corresponding to the first call is $b = 5.1372$, and the value of b corresponding to the second call is $b = 5.208$.