[Q1]
3 marks - finding A
3 marks - finding A^T
4 marks - computing (A^T)A
(-0.5 for every computation mistake, up to a max of -1.5)

[Q2]
1 full mark - reducing the matrix to a generalized upper triangular form

for each of the 3 scenarios
3 full marks - generalizes the values that a, and b are allowed, or not allowed to have
2.5 part marks - generalizes the values, but one of them is incorrect
2 part marks - not generalized, but values are correct
1.5 part marks - does not provide any values, but describes what must occur to achieve a certain type of solution

[Q3]
8 full marks - correctly reduces the matrix
7 part marks - general reduction method is correct, gets 2 free vars, but calculation error
7 part marks - general reduction method is correct, gets 1, but not 2 free variables
6 part marks - general reduction method is correct, but does not get infinite solutions at all

2 full marks - uses parametric form to display the solution(does not matter if solution is correct)
1 part mark - tries to use parametric form but does not turn free variables into parameters to be any real number