Problem 1:
   a)  X will be 11x3 (11 height, 3 width). Parameter vector will thus be 3x1. X'X will be size 3x3.
   b)  X will be 1000x3, w will be 3x1, and X'X will be 3x3.
   c)  Statement 2 is true.

Problem 2:
   a)  3

Problem 3:
   a)  2

Problem 4:
   a)  1,3

Problem 5:
   a)  3