Problem 1:

1. X will be 11x3 (11 height, 3 width). Parameter vector will thus be 3x1. X’X will be size 3x3.
2. X will be 1000x3, w will be 3x1, and X’X will be 3x3.
3. Statement 2 is true.

Problem 2:

1. 3

Problem 3:

1. 2

Problem 4:

1. 1,3

Problem 5:

1. 3