4570 Test 1 Study Guide

Test 1 covers 4570 HW 1 and HW 2, and 2550 HW 7 (Parts 1 and 2).
I will put some problems that are directly from the homework on the test.
A topical breakdown for studying is below.

Computations:

- Spanning
  See 2550 HW 7 Part 1 - problems 1, 2, 3, 4.

- Linear independence/dependence
  See 2550 HW 7 Part 1 – problem 6.

- Bases
  See 2550 HW 7 Part 1 – problems 5, 7, 8, 9(a), 10(a), 12, 13.

- Finding a basis for a subspace W
  See 2550 HW 7 Part 2 – problems 1, 2, 3.
  See 4570 HW 2 – problem 1(b).

Proofs:

- Determining if W is a subspace of V.
  See 4570 HW 1 problems 2, 6, 7(b).
  See 4570 HW 2 problem 1(a).

- Proofs involving subspaces.
  See 4570 HW 1 problem 7(a,c).

- Proofs involving linear independence/dependence and spanning.
  See 4570 HW 2 - problems 2, 5, 6, 7(a).

- Proofs involving bases and dimension.
  See 4570 HW 2 - problems 3, 4, 7(b), 8, 9.

- Proofs involving fields and vector spaces.
  See 4570 HW 1 problems 3, 4.

- Note on problem 1 from 4570 HW 1 - If I asked a problem on this part I would ask if a specific part of the vector space definition was true or not for the particular example instead of asking you to verify every part of the definition of a vector space.