Group: _____ Present: _____

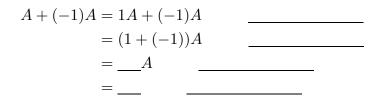
- 1. Find an element in the span of the set $\{[-1, 2, 1], [2, 5, 1]\}$ which has its third entry equal to zero and its first two entries positive.
- 2. Proposition 1: Let A be an element of a vector space V. Then (-1)A = -A.

Let's prove this. First, understand the meaning of (-1)A and -A:

(-1)A is:

-A is:

Let's show that (-1)A has the property that -A has (justify each step with a vector space property or a property of ordinary arithmetic):



State conclusion:

- 3. Explain why each of the following is always True, sometimes True, or False.
- (a) A subset of an independent set is independent.
- (b) A subset of a dependent set is dependent.
- (c) If a set of elements of a vector space is dependent, then each element of the set is a linear combination of other elements of the set.
- (d) A set of vectors which contains the zero vector is dependent.