## Writing Assignment #1

due January 30, 2019

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**Proposition** (Screencast 1.2.4). (The statement you wish to prove should be written here; for example: "For all square matrices A, if A is symmetric, then  $A^T$  is symmetric.")

*Proof.* Write the proof here as written in the video. Make sure to adhere to the writing guidelines posted on Blackboard. The goal of this assignment is to become familiar with both overleaf and LaTeX. Feel free to run your solution by me before you turn it in.

Using Align Environment ( $\S1.2, \#17a$ ). We wish to show that

$$\sum_{i=1}^{n} (r_i + s_i)a_i = \sum_{i=1}^{n} r_i a_i + \sum_{i=1}^{n} s_i a_i.$$

To see this, consider the following.

(1) 
$$\sum_{i=1}^{n} (r_i + s_i)a_i = (r_1 + s_1)a_1 + (r_2 + s_2)a_2 + \dots + (r_n + s_n)a_n$$

$$= You finish the rest.$$

$$(3) =$$

Notice in (1) we used the definition of summation. In (2) we ....

Using Align Environment (§1.2, #17b).

Using Align Environment ( $\S1.2, \#18$ ).