

## MAE 106: ASSIGNMENT 3

Quiz: 30 September 2016.

Do the following exercises.

- (1) Tan Appendix A: 1 (use 1, 3, 4, 8, 9, 12, 15, 16)
- (2) Represent the argument below symbolically, and determine whether it is a valid argument or not.

Either the Prime Minister of Canada or the President of the United States supports military intervention in Syria.

If the President of the United States supports military intervention in Syria then the President of the Russian Federation doesn't.

The President of the United States does not support military intervention in Syria.

Therefore, the Prime Minister of Canada and the Russian President both support military intervention in Syria.
- (3) Tan Appendix A: 17, 18, 25 (prove using the rules of inference)
- (4) Use the laws of inference to prove that *Modus Tollens* is a valid argument form.
- (5) Prove the following: if  $n^2$  is an odd number, then  $n$  is an odd number. (Hint: use contrapositive)