Problem Sets 1
(Due Feb 20 in class)

1. World trade patterns and driving factors (15pts)
   1) Read lecture 1 slides and summarize at least five patterns for 2017 world trade.
   2) Provide economic explanations for such patterns and illustrate with examples.
   3) To the explanations provided in (2), could you find any counterexamples?

2. Gravity model and trade flows: the gravity equation says that trade volume between any two countries is proportional to the product of their GDPs and diminishes with the distance between the two countries. Write down this equation. Can the gravity model explain well current world trade patterns? (10pts)

3. Ancient trade (before 1600) and colonial trade patterns (15pts)
   1) Read lecture 2 slides and summarize the key patterns for ancient trade and colonial trade.
   2) Provide explanations for the trade pattern evolution from the transportation cost and transaction cost perspectives. Be more specific about those costs driving the evolution of the trade patterns.

4. Evaluate the mercantilist tenets and policy recommendations for international trade in its historical context. Does mercantilism benefit the host country but harm the foreign countries? (10pts)

5. Visualize U.S. International Trade via the MIT Observatory of Economic Complexity.
   1) Where does the United States export to? (2016)
      https://atlas.media.mit.edu/en/visualize/tree_map/sitc/export/usa/show/all/2016/
   2) Where does the United States import from? (2016)
      https://atlas.media.mit.edu/en/visualize/tree_map/sitc/import/usa/show/all/2016/
   3) What does the United States export? (compare SITC2 and SITC4 dataset)
      https://atlas.media.mit.edu/en/visualize/tree_map/sitc/export/usa/all/show/2016/
   4) What does the United States import? (compare SITC2 and SITC4 dataset)
      https://atlas.media.mit.edu/en/visualize/tree_map/sitc/import/usa/all/show/2016/
   5) What does the United States export to China? (compare SITC2 and SITC4 dataset)
      https://atlas.media.mit.edu/en/visualize/tree_map/sitc/export/usa/chn/show/2016/
   6) What does the United States import from China? (compare SITC2 and SITC4 dataset)
      https://atlas.media.mit.edu/en/visualize/tree_map/sitc/import/usa/chn/show/2016/
   7) Explore the data visualization options. Would you find any other interesting U.S. trade patterns?
      Note: SITC (Standard International Trade Classification)

Note: provide sources/references when you use data/arguments from the Internet or other resources.