

Problem Set # 1

Econ 1015

- 1) George and John, stranded on an island, use clamshells for money. Last year, George caught 300 fish and 5 wild boars. John grew 200 bunches of bananas. In the two-person economy that George and John set up, fish sell for 1 clamshell each, boars sell for 10 clamshells each, and bananas go for 5 clamshells a bunch. George paid John 30 clamshells for helping him to dig bait for fishing, and he also purchased five of John's mature banana trees for 30 clamshells each. What is the GDP of George's and John's island in terms of clamshells?
- 2) How would the following transactions affect the GDP of the United States?
  - a) The U.S. government pays \$1 billion in salaries for government workers.
  - b) The U.S. government pays \$1 billion to Social Security recipients.
  - c) The U.S. government pays a U.S. firm \$1 billion for newly produced airplane parts.
  - d) The U.S. government pays \$1 billion in interest to holders of U.S. government bonds.
  - e) The U.S. government pays \$1 billion to Saudi Arabia for crude oil to add to U.S. government-owned oil reserves.
- 3) MNLogs harvested logs (with no inputs from other companies) from their property in northern Minnesota. They sold these logs to MNLumber for \$1,500 and MNLumber cut and planed the logs into lumber. MNLumber then sold the lumber for \$4,000 to MNFurniture. MNFurniture used the lumber to produce 100 tables that they sold to customers for \$70 each.

Company	Revenues	Cost of purchased inputs	Value added
MNLogs			
MNLumber			
MNFurniture			

- a) Complete the table to calculate the value added by each firm.
- b) Suppose that all of these transactions took place in 2007. By how much did GDP increase because of these transactions?
- c) Suppose the MNLogs harvested the logs in October 2007 and sold them to MNLumber in December 2007. MNLumber then sold the finished lumber to MNFurniture in April 2008 and MNFurniture sold all 100 tables during the rest of 2008. By how much did GDP increase in 2007 and 2008 because of these transactions?