**GDP and the business cycle ANSWERS**

1. Assume last year consumption expenditure was $70B, investment was $16B, government purchases of goods and services were $12B, exports were $4B, and imports were $3B
   1. What did GDP equal last year? GDP = C + I + G + NX

70+16+12+(4-3) = 99B

* 1. This year imports increased by $5B. If all other types of expenditures stay the same, what does GDP equal this year? 70+16+12+ (4-8) = 94 OR

70+16+12+ (4-5) = 97

1. One of 4 expenditure categories in GDP is net exports. How can net exports be negative? YES – if imports are greater than exports
2. Is the computer chip that Dell Corp. buys from Intel Corp. is a final good?

NO

1. Purchasing a dump truck is a consumption expenditure? NO, investment (capital good)
2. Does the value of production equal income which equals expenditure? GDP = GDI; what goes into production is going to equal what is produced (in theory)
3. Which is a final good:
   1. Flour used to bake bread
   2. Bread used for sandwiches for your lunch Yes, if you are making it, No if you buy the sandwich premade
   3. Songs downloaded on your iPod Yes
   4. A tractor used by a farmer to plant corn Depends… is a capital good, if for own use
4. Give 2 examples of an investment (included in GDP)? Capital goods, Inventory investments, residential real estate (new construction, improvements)
5. In one year, a firm increases its production by $9M and increases sales by $8M. Ceteris paribus (all things equal), in the economy:
   1. GDP increases by $8M and inventory investment decreases by $1M.
   2. GDP increases by $9M and inventory investment increases by $1M
   3. Inventory investment decreases by $1M
   4. GDP increases by $8M and investment increases by $1M
   5. GDP increases by $17M
6. Expenditure equals (give equation elements) Y= C+I+G+NX
7. Additions to inventories are counted in what component of GDP? I

Total produced is divided up: all that is sold is “C” in the GDP and the remaining inventory (produced that year) is considered a capital investment and is “I

1. Why are intermediate goods or services NOT counted in GDP? Would be counted twice
2. Why does total expenditure equal total income? The $ going into production should be equal what is being consumed

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| **Item** | **Amount ($ in billions)** |
| Wages | 5875 |
| Consumption expenditures | 6987 |
| Indirect taxes less subsidies | 630 |
| Interest, rent, and profit | 2248 |
| Depreciation | 1329 |
| Investment | 1586 |
| Statistical discrepancy | 0 |
| Net exports | -349 |

1. The table above gives some of the items in the US National Income and Product Accounts for 2001.

Calculate the US GDP in 2001 using both the expenditure and income approaches (show work below) Can only use income approach because there is no Government consumption on the chart.

Wages + Rent + Profit + Government + Interest – Statistical Discrepancy =

Wages + (Interest, Rent, Profit + Depreciation) + (Indirect Taxes less Subsidies) – Statistical Discrepancy

5875 + 630 + 2248 + 1329 – 0 = 10,082B

1. What is the difference between nominal and real GDP? Can they ever be equal? Nominal is the current figure; real is adjusted for inflation using a base year. Yes, they can be equal if there is no inflation or deflation.
2. Why do we use real GDP rather than nominal GDP when we measure changes in production? Allows us to compare them because they are using the same base value
3. What’s the difference between GDP and GNP? Gross Domestic Product is based on domestic production and consumption; Gross National Product is based on GDP +non-domestic labor (US citizens working abroad)
4. Why hasn’t the US used GNP to measure GDP since 1991? Other countries do not use it; has become harder to calculate due to the growth in the global economy (more workers traveling abroad)