1. The following table is a full list of production activities in a hypothetical economy (in $ billions) during 2013:

   Restaurant dinning: $2,000
   Cooking at home: $1,000
   New apartment constructions: $30,000
   Apartment rents: $10,000
   Price level in 2013 = 106.7

   a. What is the total (nominal) GDP in 2013?

   b. For each item in your GDP calculation, indicate whether it goes in to Consumption, Investment, Government Spending, or Net Exports.

   c. How do you compute the real GDP in 2013 (assuming the price level is equal to 100 in 2009)? Write down a formula, then plug in all the relevant numbers.

   d. If real GDP in 2014 is $44,000, is the real GDP growth positive or negative from 2013 to 2014? Explain.

2. What is the natural rate of unemployment?

3. What is the long-run average unemployment rate in the United States?

4. Suppose you are given the following numbers about an economy (in millions):

	Notation	2013	2014
Relevant Population (>16, non-institutionalized population)	P	250	250
Not in labor force	NLF	90	100
Employment	E	150	140

   a. Calculate the unemployment rate for 2013 and 2014. Show your steps.

   b. Compared to 2013, is the unemployment rate higher or lower in 2014? Do you think such a change in the unemployment rate is good or bad for the economy? Briefly explain

5. The opportunity cost of attending college is likely to be highest for a high school graduate:
   a. Who has access to student loans
   b. Whose family is extremely wealthy
   c. Who is very intelligent
   d. Who is capable of playing a well-paid professional sport

6. Jewell attends a wedding reception where dinner is served. For her entrée, she has the option of steak, chicken, or pasta. If she chooses the pasta, then her opportunity cost is:
   a. The chicken
   b. The steak
   c. The chicken and the steak
   d. Either the chicken or the steak – whichever would have been her second choice to the pasta

7. You order a $20 Seattle Mariners sweatshirt online for a Father's Day gift. There's a standard shipping charge of $10, but you see that orders $25 or more ship for free. You could also order a $5 Mariners sticker, but you're not sure your father would like it. You decide to order the sticker. This is an example of
   a. Incentives
   b. Trade offs
   c. Opportunity costs
   d. Macroeconomics

8. Which point on the graph below represents an inefficient use of society's resources?

The Production Possibilities Frontier for Pizza and Wings
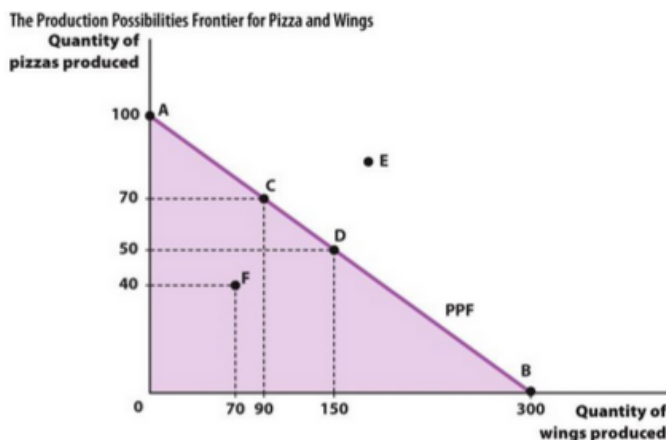
   a. Point A
   b. Point B
   c. Point E
   d. Point F

9. Which of the following statements is normative?
   a. Microeconomics is a great class
   b. George Washington was the first president of the United States
   c. The newspaper reports that is going to rain tomorrow
   d. Africa is a continent

10. Suppose that Marie is buying bananas. She decides that she would like to purchase three bananas at the price of $0.25/banana but not a fourth. Which of the five foundations of economics best describes Marie's thinking?

a. Opportunity cost
    b. Incentives
    c. Trade creates value
    d. Marginal thinking
    e. Trade off

11. The Hoo Crew sends out weekly emails encouraging students to attend athletic events. At the same time, they highlight which games/matches are "orange passport" (OP) events. OP points give you a higher probability of getting a ticket to UVA basketball games. What rotunda principle is the Hoo Crew email exhibiting?

12. Suppose that in a time of crisis everyone pitches in and works more than full-time. How is this represented by a production possibilities frontier?
    a. The economy moves from a point below the PPF to a point on the PPF
    b. The economy moves from a point on the PPF to a point beyond the PPF
    c. The entire PPF shifts out

13. What is the difference between a direct incentive and an indirect incentive? Give an example:

14. GDP is the market value of all final goods and services produced in a nation in a given year.
    a. What is the difference between a final good and an intermediate good?

    b. Indicate whether the following are final or intermediate goods:

    A computer bought by you to surf the internet

    A computer bought by the University of Virginia for Clemons library

    A tractor bought by Albemarle County (a government) to plow snow

    A tractor bought by Farmer Glenn to plow his cornfields

    Corn seed used by Farmer Glenn to grow corn

15. The price of cotton rises. Show how this affects the consumer market for polyester:

16. The price of "Got Dumplings" at the dumpling cart goes up. How does this affect your demand for dumplings? Please show on a graph and in words.

17. Which of the following best describes the relationship between imports and exports? Import spending is _____GDP and export spending is_____GDP.
    a. Added to; added to
    b. Subtracted from; subtracted from

c. Added to; subtracted from
d. Subtracted from; added to

18. Which of these included in GDP?
    a. Money paid to CVS for a flu shot
    b. Money earned by Las Vegas casinos for providing services to gamblers
    c. Commissions paid to E*TRADE because they facilitated a stock trade
    d. A and B
    e. All of these

19. Who is included as unemployed?
    a. Someone who has a part time job, but wants a full time job
    b. Someone who was laid off three weeks ago and has searched for a new job since then
    c. Someone who has does not have a job and last looked for a job 7 weeks ago
    d. Someone who has who was just laid off a week ago, but not looking for a job

20. If your boss calls you into her office and offers you a promotion, which includes a 5% raise, how would you evaluate the value of your raise?
    a. Very good since the inflation rate is 6%
    b. Very good since the inflation rate is 1%
    c. Bad since the inflation rate is 1%
    d. Bad since the inflation rate is 4%

21. A loaf of bread cost $0.22 in 1955 and the CPI was 26.8. The CPI in 2013 was 233. The cost of bread in 1955 using 2013 dollars would be
    a. .03
    b. 2.53
    c. 1.91
    d. 51.26

22. An economic _____ has a higher growth rate than the long run average growth and occurs from the _____ to the _____ of the cycle
    a. expansion; trough; peak
    b. contraction; peak; trough
    c. expansion; peak; trough
    d. contraction; trough; peak

23. If the natural rate of unemployment is 5% and the actual rate is 8%, the cyclical unemployment is:
    a. Positive
    b. Negative
    c. Zero

24.
    a. What is an example of a good or service NOT included in GDP?

b. What would happen to GDP if we were to include it in the calculation?

25. These are two-part answers for each question. Here is how you should answer it:
        a. If the following takes place, GDP will (rise, fall, stay the same):
        b. What part of the GDP equation will it affect?

    Ex. Households buy more cars than ever before:
        a. rise
        b. consumption (C)

    a. Exports go up:
        a. _____
        b. _____

    b. UPS purchases new trucks to hold more packages:
        a. _____
        b. _____

26. The GDP for 1929 was $88.2 billion and in 1930 it was $80.7 billion using (both years in 1937 dollars as the base year). Show your work.
    a. What was the growth rate from 1929 to 1930?

    b. How does this compare to the historical yearly growth rate?

27. The table below presents data for Coppockville. As you answer this question, be sure to show your work clearly, so you have a chance for partial credit.

Year	Nominal GDP (millions of $)	GDP Deflator	Population (millions)
2010	$10	50	2
2011	$12	80	3
2012	$11	100	3

    a. Convert the 2010 and 2011 GDP figures for Coppockville to 2012 dollars.

    b. What was Coppockville's growth rate of real GDP for 2011? Express your answer in percentage terms.

    c. We use per capita real GDP growth to measure economic growth. Compute this for Coppockville in 2010 and 2011, and calculate the growth rate of real GDP per capita. Explain why it is more informative than real GDP growth for the typical Coppockvillian.

28. If supply and demand intersect at a price of $5.00, then a reduction in price from$6.00 to $5.00 will cause:

    a. an increase in quantity supplied, a decrease in quantity demanded, and the alleviation of a shortage.
    b. an increase in quantity demanded, a decrease in quantity supplied, andthe alleviation of a shortage.
    c. an increase in quantity supplied, a decrease in quantity demanded, andthe alleviation of a surplus.
    d. an increase in quantity demanded, a decrease in quantity supplied,and the alleviation of a surplus.

29. Which of the following would be expected to cause an increase in the supply offax machines?
    a. an increase in the number of business firms demanding fax machines.
    b. an increase in the price of fax machines.
    c. a decrease in the cost of manufacturing fax machines.
    d. the expectation that the price of fax machines will increase in future.

30. When cyclone Larry tore through key banana growing regions of Australia,destroying 80 percent of the banana crop,
    a. banana prices rose, and quantity sold rose.
    b. banana prices declined, and quantity sold fell.
    c. banana prices rose, and quantity sold fell.
    d. banana prices declined, and quantity sold rose.

31. To calculate nominal GDP:
    a. sum the quantity of all final goods and services produced in an economyin a year.
    b. sum the quantity of all goods and services sold in an economy in a year.
    c. weight the output of each final good and service produced in aneconomy in a year by its price in that year and then sum the result.
    d. weight the output of each good and service produced in an economy in ayear by its price in that year and then sum the result.

32. The reason economists include only the value of final goods and services whenthey calculate GDP is that intermediate goods:
    a. do not create value added.
    b. do not add to economic welfare.
    c. have no social value.
    d. would be double counted otherwise.

33. If a country's real GDP and population are, respectively, $500 billion and 200million, then its per capita real GDP is:
    a. $250.
    b. $1,000.
    c. $2,500.
    d. $10,000.

34. The U.S. government reported in March 2009 that there were 81.0 million people not in the labor force; 154.0 million in the civilian labor force, and 140.9 million employed. Based on these numbers, what was the unemployment rate?
    a. 13.1
    b. 9.3
    c. 8.5
    d. 5.5

35. Clark Kent, a middle-aged bachelor, quit his news reporter job and currently is looking for a better job. The Bureau of Labor Statistics counts Clark as:
    a. not in the labor force.
    b. employed.
    c. unemployed.
    d. a discouraged worker.

36. Suppose the inflation rate was 100% this year, and the real GDP growth rate was 50%. If nominal GDP was 100 million (M) last year, what was nominal GDP this year?
    a. 400M
    b. 250M
    c. 150M
    d. 300M

37. When someone stops mowing his own lawn and hires a lawn service to mow it for him, what happens to GDP?
    a. Nothing; the same lawns are being mowed, so production has not changed.
    b. It rises because GDP includes the value of the additional leisure time that the person gets by hiring someone else.
    c. It rises because when the person mows his own lawn it is non-market production that is not counted.
    d. It falls because hiring a lawn service reduced the amount of other goods that the person could purchase.

38. South Korea is economically advanced relative to North Korea by all the standard measures of economic well-being (e.g., per capita income, GDP, food consumption). North Korea devotes a larger proportion of its economic resources to military/defense than does South Korea. And yet South Korea spends *more* on military/defense than does North Korea. Show the above characteristics of the two Korean countries on a well-labeled PPF graph in terms of consumer goods (butter) and military/defense (guns).

39. You collect Pokémon cards. It becomes common knowledge to all *consumers* that the price of Pokémon cards will increase tomorrow. Suppose that through their own deduction *producers* also expect the price of Pokémon cards to increase tomorrow. Consumers and producers do not share this information with each other, but both groups arrive at the same expectations for the future. Illustrate the effect of these realizations on the demand and supply of Pokémon cards *today* and explain what happens to the equilibrium price and equilibrium quantity.

40. Elliott took Economics 2020 in 2013 and bought a new textbook from the UVA bookstore for $100. At the end of the semester he sold the book back to the bookstore for $50. You are taking Economics 2020 in 2014 and bought Elliott's used book from the UVA bookstore for $80. Which transactions and how much money is included in GDP?

41. Consider the market for Captain Morgan rum, which is currently at equilibrium. Then two simultaneous events occur: the price of Jack Daniels whiskey (a substitute good) increases and the price of sugar cane (an ingredient for rum, but not whiskey) increases.

    Draw a (well-labeled!) graph illustrating the effect of these simultaneous changes on the market for Captain Morgan rum. In the boxes for price and quantity, draw an arrow indicating the direction of change for equilibrium price and quantity.

42. Correct the following statements, if needed, so that the terms "demand," "quantity demanded," "supply," and "quantity supplied" are used correctly. To correct a statement, simply cross out the word that is incorrect and write in the correct word.

    a. A decrease in the supply of frog legs means suppliers will provide fewer frog legs at a given price.

    b. Whenever the price of bicycles decreases, the supply of bicycles decreases.

    c. An increase in the quantity demanded of coffee means consumers are willing and able to buy more coffee at any given price.

    d. Since consumers no longer like books, book producers respond by decreasing supply.

43. Will Shakespeare is a struggling playwright in sixteenth-century London. As the price he receives for writing a play increases, he is willing to write more plays. For the following situations, use a diagram to illustrate how each event affects the equilibrium price and quantity in the market for Shakespeare's plays.

    a. The playwright Christopher Marlowe, Shakespeare's chief rival, is killed in a bar brawl.

    b. The bubonic plague, a deadly infectious disease, breaks out in London.

44. During the Great Recession, most Americans experienced sharp decreases in their incomes. But consumers weren't the only ones who were hurt: Target experienced decreased sales relative to before the recession. Walmart, on the other hand, experienced increased sales relative to before the recession.

    a. Explain, using vocabulary terms from the first three chapters of your textbook, why this may have happened. You should not need more than a few sentences.

b. Draw two graphs: one for the market for Target, and one for the market for Walmart. Starting from equilibrium, draw the situation described above. What shifter of supply or demand caused this change?

c. Again, draw two graphs for each market. Assume there is no recession, and everything in the economy is normal. A natural disaster destroys a large Target factory. Assuming that Target and Walmart are substitutes, draw the effect of the natural disaster in the markets for Target and Walmart. What shifters of supply and demand cause these changes?

d. Draw a graph for the market for Target. Assume there is no recession, and everything in the economy is normal. Suppose that Target executives decide to increase the equilibrium price for its goods without changing anything about the company's supply process. What happens as a result of this decision? Is it sustainable for very long? Why or why not? What Rotunda Principle does this reflect?

45. Determine if the following items are included in GDP or not. If they are included, to which category (C, I, G, NX) do they belong?
   a. People in the United States buy clothing made in China

   b. You are paid unemployment compensation after being laid off from work

   c. You win the lottery

   d. A Ford Fusion completed in 2011, but not sold until 2012

   e. You purchase a new townhome

   f. You receive a salary as a government employee

   g. Pickles bought by Subway

   h. A company purchases new machinery for peanut butter manufacturing

   i. You purchase Apple stock without the use of a broker

46. Consider the island of Coconutopolis. There is only one inhabitant (your TA, Elliott), and the only things he produces are coconuts. He produces coconuts by collecting seeds, digging holes, planting the seeds, and caring for the plants. His current GDP is $100. Describe exactly how the following scenarios affect GDP.

   a. A shovel, worth a market value of $20, washes up on shore

   b. A box of chocolates, worth a market value of $5, washes up on shore

47. Suppose that last year the Portlandia GDP was $100,000 and this year it was $125,000. Assume Portlandia had a population of 5,000 people last year and 5,000 people this year. What is the growth rate in Portlandia's per-capita GDP?

48. Suppose that there is a single economy, which produces only coconuts and used cars. Using the following chart to answer the questions below.

Good	2010		2011	
	Quantity	Unit Cost	Quantity	Unit Cost
Clubs	100	$50	75	$75
Tees	500	$0.10	1000	$0.12
Balls	1000	$2	1100	$2.31

   a. Calculate the CPI for 2010 and 2011. Use 2010 as your base year in all calculations.

   b. Did prices increase for all goods from 2010 to 2011? Why or why not? Be careful!

49. Suppose that you are the President of the economy in Question 1 and you are up for re-election. You want to be able to say that the economy is better now than when you took office four years ago, so you look at some of your country's economic data. You see that four years ago your labor force size was 80,000 with 8,000 people unemployed (5,000 people were frictionally unemployed and 3,000 people were structurally unemployed), and that today your labor force size is 100,000 with 10,000 people unemployed (5,000 people are frictionally unemployed and 4,000 people are structurally unemployed). Can you say that the economy is better off today than it was four years ago? Why or why not?

50. Consider the market for Budweiser beer. In two weeks, during the Super Bowl, Budweiser airs a heartwarming ad about a man and his dog. The ad is wildly popular, and the next day all anyone can talk about is Budweiser. In the space provided below please illustrate using the supply and demand model the effect of this ad on the market for Budweiser. Specifically, what happens to the equilibrium price and quantity?

51. Jeffrey is the sole inhabitant of a small island nation. Calculate the GDP breakdown for his economy each year. Assume prices stay the same each year. There is no government.
   a. In 2013, he collects 500 coconuts, valued at $1/piece. He eats 200 of them. He stores 100 of them. He trades the remaining 200 to a neighboring island. In return he receives and eats 200 oranges that he values at $4/piece.

      C =
      I =
      NX =
      GDP =

b. In 2014, he eats the 100 coconuts he stored the previous year. He builds and lives in two houses that he values at $500/piece. He grows 100 bushels of wheat, which he values at $4/bushel. He trades 50 bushels to a neighboring island for a tool he values at $250. He turns the remaining bushels into 20 loaves of bread that he values at $15/piece. He eats all of the bread.

   C =
   I =
   NX =
   GDP =

c. What was the growth rate of GDP from 2013 to 2014 (in % terms)?