

Instructions: Only one section will be graded for correctness. The rest will be graded on completion. You will get 50% for completing the homework assignment with an honest effort and 50% for the graded problem. You may work with one other student. If you do, please only turn in one copy with both of your names on it.

1: Multiple Choice

Instructions: Choose the most correct answer for each question.

(1) To draw a Lorenz curve showing the distribution of income by household, one should rank all households according to:

- A. household size.
- B. age of head of household.
- C. wage level.
- D. income or consumption level.

(2) Elements of a pro-poor development strategy would contain all of the following EXCEPT:

- A. encouraging rapid economic growth.
- B. improving basic health and education.
- C. designing social safety nets for vulnerable groups.
- D. encouraging zero population growth through free access to all forms of birth control.

(3) The design of social safety nets differs from income transfers in that the former:

- A. recognize that poverty is often transitory and not permanent.
- B. do not always go to poor people.
- C. are expensive to administer and lack public support.
- D. none of the above.

(4) By 2008, Finland had reached the fourth stage of its demographic transition, in which its population growth had fallen close to:

- A. 5 percent.
- B. 2.2 percent.
- C. 0 percent.
- D. -7.5 percent.

(5) In 2009, approximately what percentage of the population lived in low-income countries?

- A. 15 percent
- B. 50 percent
- C. 70 percent
- D. 84 percent

(6) World population will continue to grow over the next 50 years for all of the following reasons EXCEPT:

- A. the desire for large families.
- B. the failure to achieve desired amount of children.
- C. population momentum.
- D. total fertility rates in all countries will remain above their replacement levels.

(7) China's decline in population over the past generation can be attributed to all of the following EXCEPT:

- A. government population policies.
- B. increased urbanization.
- C. rapid economic growth.
- D. the revival of the principles of Confucius and social responsibility.

(8) The introduction of textbooks improved reading scores for all students in:

- A. Jamaica.
- B. the Philippines.
- C. Kenya.
- D. all of the above.

(9) For the students' families in developing countries, the main implicit cost of secondary education is:

- A. required school fees.
- B. earnings or work at home forgone when the student attends school.
- C. the cost of textbooks.
- D. incidental costs like school uniforms and transportation.

(10) In low-income countries, the demand for education:

- A. remains high across all segments of the population.
- B. is confined mostly to urban areas.
- C. is confined mostly to social elites, both urban and rural.
- D. is not very strong, due to poverty and hopelessness.

(11) Grade survival rates estimate:

- A. how many children actually complete a certain grade level.
- B. how many children die from disease and malnutrition at each grade level.
- C. how many grades of school the country can afford to offer.
- D. whether the grades earned continue to be valid, due to rampant grade

2: Chapter 6

- (a) Cohlesburg has an inequality problem. Instead of a small amount of citizens having all of the wealth, there is a large amount of the population that earns a middle-level income and an even larger amount of the population has a high level income. Sketch the frequency distribution of income for Cohlesburg.
- (b) Create a plausible size distribution of income for Cohlesburg.
- (c) Assume that the mean income per day for those living under the poverty line is \$1 and the mean income for those living above the poverty line is \$999. The number of those living in poverty in Cohlesburg is 3000 while the number of those living above the poverty line is 7000. The poverty line is set at \$1.25 a day. Find the poverty gap in Cohlesburgh.
- (d) Assume that the poverty line is lowered to \$1 a day. Why might policy makers in the government make this change? Do you expect the poverty gap to go up or down? Why?
- (e) Explain why the Washington Consensus may be perceived as being harmful to the poor. Are these concerns valid?
- (f) Challenge Question: Now, assume that the function of the Lorenz curve can be described as: $L(x)$, where x is the cumulative share of people from lowest to highest income. Find the Gini coefficient.

3: Chapters 7

(a) Using Table 7-1 (pg 226), what is the population of Eurasia (both Europe and Asia)? What is the birth rate of Eurasia? How much of the world population is contained in Eurasia?

(b) Using Box 7-1 (pg 225), what is the percent change in the total fertility rate of Sub-Saharan Africa from 1967 to 1987? Given the information in the graph, which region would you expect to have the lowest fertility rate in 2018? Why?

(c) Using Table 7-2 (pg 230), answer the following questions. Which country will be the 5th largest country by 2050? How much will this country's population growth by? Is the percent increase significantly greater than or less than the percent increase of other countries? Explain what may contribute to this increase.

(d) Using Box 7-3 (pg 239), answer the following questions. In Russia, roughly how many people are less than 4 years old? How many of those people are female? In Nigeria, how many males are less than 20 years old? What percent of the population is this? Which country would you say has the higher fertility rate currently? Why?

4: Chapters 8

(a) Consider the country of Freedonia. In Freedonia, the private rate of return on education is lower than that of the social rate of return to education. What does this imply about the externalities of education? What would you recommend to the government of Freedonia?

(b) Let $i = 0.05$. Groucho, a man living in Freedonia, is trying to figure out if he should take a year of extra education. If he does, Groucho can earn \$40 in the next year ($t = 1$). The year after that, he can earn \$220. What is Groucho's present value of future payments if he educates himself?

(c) Groucho could earn \$100 this year if he does not enroll in the education program. If he does enroll, he must does not have to pay any tuition immediate, but for the next two years, Groucho must pay \$50 per year to the program. What is the present cost of enrolling in the year long education program.

(d) Find the internal rate of return for this extra year of schooling.

(e) Using table 8-3 (pg. 273), answer the following questions. What two main statistics are in this table? Each statistics is broken in three parts and reported for low, middle, and high income countries. How are the statistics constructed? Explain the difference between the tertiary private rate of returns for low and high countries.