

3. How would you react to an economist who is adamant that South Korea, Taiwan, Hong Kong and Singapore grew impressively in the last four decades due primarily to technological change and total factor productivity improvements?

4. Check out the graph attached at the end. It shows the relation between countries' human capital levels in 1999 and their GDP per capita in 2000. Based on the graph and what we learned in class, do you think that human capital lead to higher incomes per capita?

II. MULTIPLE CHOICE (3 points each)

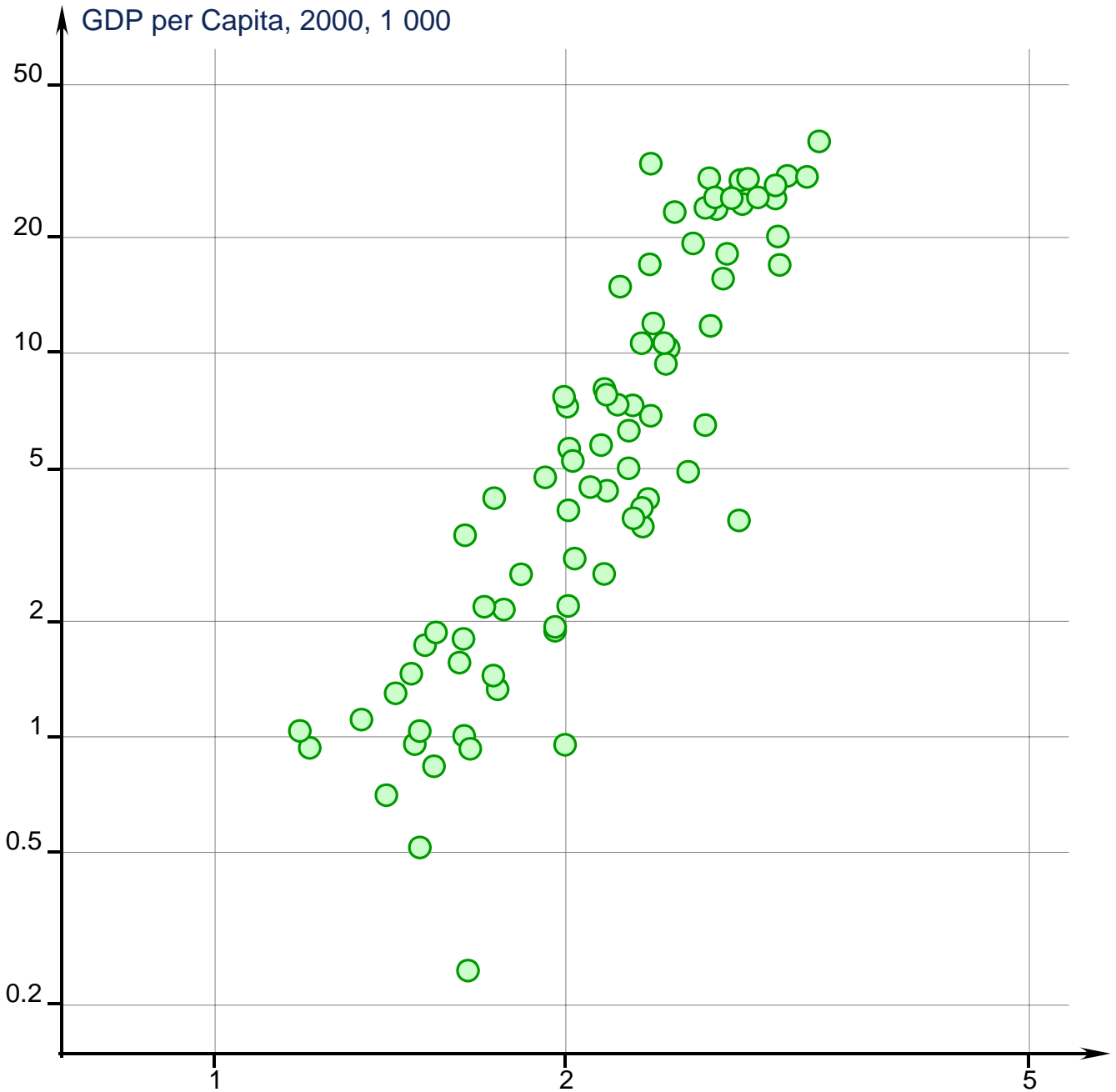
1. Which of the following factors could be a significant reason for one country to be richer than another?
 - a) lower level of investment.
 - b) higher rate of inefficiency.
 - c) lower level of technology.
 - d) none of the above.
2. If two countries are identical in their fundamentals, which country should we expect to have a slower growth rate?
 - a) the country with lower initial level of capital stock.
 - b) the country with larger population.
 - c) the country with the lower level of income.
 - d) all of the above.
3. Which of the following would you expect to have a correlation coefficient of 0?
 - I. A country's distance to the equator and their average temperature.
 - II. Someone's hair color and their athletic ability.
 - III. Family income and square footage of family home.
 - a) II and III only.
 - b) I only.

- c) II only.
 - d) I and III only.
4. Which of the following is NOT a factor of production?
- a) machines.
 - b) workers.
 - c) land.
 - d) taxes.
5. Differences in the amount of capital per worker explain a large difference in _____ among countries.
- a) work force.
 - b) technology.
 - c) GDP.
 - d) Population.
6. Which of the following most likely exhibits increasing marginal product?
- I. A shoe factory currently uses 4 machines to produce 20 units of output. When one more machine is added, output increases to 25.
 - II. A student studies for 10 hours and receives a 90 on his exam. For the next exam, he studies for 12 hours and receives a 92.
 - III. A restaurant employs one chef who can produce 10 meals per hour. After a second chef is hired they specialize tasks and output increases to 25 meals per hour.
- a) II only.
 - b) III only.
 - c) II and III only.
 - d) I and III only.
7. What governs the accumulation of capital?
- I. Investment
 - II. Productivity
 - III. Depreciation
- a) I only.
 - b) II only.
 - c) I and III only.
 - d) I, II and III.
8. Suppose that a constant 20% of output is invested and capital stock depreciates at a constant rate of 0.8% and population is constant. If the economy exhibits a Cobb-Douglas production function, with $a = 1/3$ and $A = 1$, and the current level of capital per worker is 125, what will happen to capital stock?
- a) It will decrease.
 - b) It will increase.
 - c) It won't change because the economy is in its steady state.

- d) Not enough info to determine.
9. Suppose that a country is in a steady state when numerous tornados hit and destroy much of their capital, but nothing else is affected. What should we expect to happen?
- The country's steady-state level of output will rise, but the country's capital stock will rise to reach it.
 - The country's output will jump above its steady-state and then capital stock will slowly fall.
 - The country's steady-state level of output will fall, but the country's capital stock will fall to reach it.
 - The country's output will fall below its steady-state and then capital stock, and hence output, will slowly rise.
10. According to the Malthusian Model, if the size of the population is below its steady-state level, and a disease strikes which further reduces the size of the population, what would be the effect on the growth rate of population?
- It would decrease
 - It would increase
 - It would immediately jump to its steady state level
 - It would not change
11. An increase in population growth would affect the dynamics of the Solow model in the same way as which of the following?
- An increase in the rate of depreciation.
 - An increase in the rate of investment.
 - An increase in the level of technology.
 - An increase in efficiency.
12. Which of the following is a flawed reason as to why development has led to reduced fertility in developed countries?
- In developed countries, schooling is more expensive and children start to work much later in life.
 - In developed countries, people don't need to have additional children to ensure that at least some children will survive.
 - In developed countries, parents are afforded the choice between "quality and quantity" of children.
 - In developed countries, having children is relatively cheap because the opportunity cost of having a child is lower.
13. Which of the following had, or is predicted to have, the lowest ratio of children to elderly?
- less developed countries in 1950.
 - most developed countries in 1950.
 - most developed countries in 2050.
 - less developed countries in 2050.

14. Suppose that GDP per capita is increasing, but GDP per worker is decreasing. What does this infer about the growth rate of the working-age fraction of the population?
- It is zero.
 - It is decreasing.
 - It is increasing.
 - Cannot tell.
15. Suppose that in 50 years the income growth rate of poor countries exceeds the population growth rate of poor countries. What does this most likely infer about the fraction of the world's population living in rich countries in 50 years?
- It will increase.
 - It will decrease.
 - It won't change.
 - Cannot tell.
16. What is the relationship between health and income?
- Higher income leads to better health.
 - There is no causal relationship between health and income.
 - Both health and income are endogenous.
 - Better health leads to higher income.
17. Suppose that the effect of income on health can be represented by the function: $h(y) = y^{1/2}$ And the effect of health on income can be represented by the function: $y(h) = h + 6$
What are the equilibrium levels of health and income?
- $h = 0, y = 9$.
 - $h = 3, y = 9$.
 - $h = 9, y = 3$.
 - $h = 9, y = 0$.
18. Suppose that someone completing 11th grade receives a wage of \$40, while someone completing 12th grade receives a wage of \$60. The two people are otherwise identical. What is the return to the 12th year of schooling?
- 50 percent.
 - 75 percent.
 - 100 percent.
 - 150 percent.
19. If a widespread disease with no cure ravages a nation, what will be the effect on the equilibrium level of income?
- It will remain constant.
 - It will rise.
 - It will have no effect on income.
 - It will fall.
20. In the United States, which of the following is the greatest higher education cost for the nation?

- a) Textbooks.
- b) Teachers' salaries.
- c) School buildings.
- d) The opportunity cost of not working while in school.



Correlation coefficient: 0.888

Human Cap/Wrkr, 1999