

## Growth and the World Economy

ECON 3133

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### Answers

1. The problem states that  $(K/N)_{US} = \$2,250,000$  and  $(Y/N)_{US}/(Y/N)_I = 15$ .
$$15 = (Y/N)_{US}/(Y/N)_I = (K/N)^{1/2}_{US}/(K/N)^{1/2}_I$$
$$15^2 = 225 = (K/N)_{US}/(K/N)_I$$
$$225 = 2,250,000/(K/N)_I$$
$$(K/N)_I = 2,250,000/225$$
$$(K/N)_I = \$10,000$$
2.
  - a. If the increase is permanent, income-per-capita growth rates should increase. Countries with higher ratios of investment to output are known to have higher growth rates.
  - b. Growth rates of income per capita should increase; countries with freer trade grow faster than countries with less free trade
  - c. Growth rates of income per capita should be positively affected; countries with higher measures of human capital grow faster than those without them.
  - d. Higher population growth rates are negatively related to growth rates of income per capita, so they should fall.
3. Differences include savings (positively related) and population growth rates (negatively related), human capital (positively related), openness to trade (positively related), and other market distortions (generally positively related) as well as political (more stability, more growth) and geographic variables (more temperate climates have higher growth rates). Social infrastructure and institutions may also play a role (those aligned with more law and order and bureaucratic quality have higher growth rates).