The question gives us economic growth rates and GDP per capita values for France and Korea from different years. We need to use this information to calculate the doubling times and project future GDP values for each country.

For France's per capita real GDP: we know that with a constant growth rate r, GDP will double every (ln 2)/r years, where ln 2 is the natural log of 2 (about 0.693). France's growth rate is given as 1.9% per year, which can convert to 0.019. So, plugging into the formula, France's doubling time = 0.693/0.019 = 36.5 years.

For Korea's doubling time: Korea's growth rate is 4.2% per year, which converts to 0.042. Doubling time = 0.693/0.042 = 16.5 years.

To calculate France's per capita GDP in 2045: given that the value in 2003 was $28,900. With 1.9% annual growth. 2045 is 42 years after 2003. The GDP value will be $28,900 (1+.019) ^42= $63,710.9

For Korea's 2045 value: The starting value in 2003 was $12,700 Korea. The 2045 value will be $12,700 (1.042) ^42 = $71,490.43