F-LE A valuable quarter

Task

In 1901, the San Francisco mint produced only 72,664 quarters. By comparison, during other years around the turn of the century they made between 1 million and 2 million quarters. As a result these 1901 San Francisco quarters are extremely rare coins and today, in brand new condition, each one is worth about $60,000.

a. Suppose you put $0.25 in the bank, on the first of January 1901, at 5% interest compounded annually. How much money would you have on January 1, 2013? What if the annual interest rate were 10% or 15%?

b. What can you deduce about the annual appreciation rate of the quarter as a rare coin? Explain.

c. Find the annual appreciation rate of the quarter as a rare coin. Does this agree with your answer to part (b)?