Cumulative Return on $1,000 invested in Google vs Apple II

# Question Explanation (20 words):

Compute the cumulative return for rolling 1-year periods, using a time-based window to analyze Google and Apple stocks.

# Answer Explanation (20 words):

The code calculates daily returns, applies a time-based rolling 360-day cumulative return, multiplies by 100, and visualizes performance.

# Full Code Answer:

# Import numpy  
import numpy as np  
  
# Define a multi\_period\_return function  
def multi\_period\_return(period\_returns):  
 return np.prod(period\_returns + 1) - 1  
  
# Calculate daily returns  
daily\_returns = data.pct\_change()  
  
# Calculate rolling\_annual\_returns using a time-based window  
rolling\_annual\_returns = daily\_returns.rolling('360D').apply(multi\_period\_return)  
  
# Plot rolling\_annual\_returns after multiplying by 100  
rolling\_annual\_returns.mul(100).plot()  
plt.show()

# Exercise Screenshot:

