Assignment 3

The price of a particular stock is given by the formula:

\[ P(t) = P_0 e^{rt} \]

where:
- \( P(t) \) is the price of the stock at time \( t \)
- \( P_0 \) is the initial price of the stock
- \( r \) is the annual interest rate
- \( t \) is the time in years

1. If the stock price is \$200 and the annual interest rate is 5%, what is the expected price after 2 years?

2. If the initial price of a stock is \$100 and the annual interest rate is 4%, what is the expected price after 5 years?

3. The price of a particular stock is given by the formula:

\[ P(t) = P_0 e^{rt} \]

If the initial price is \$100 and the annual interest rate is 3%, what is the expected price after 10 years?