Loan Payment Calculations

Given a loan amount (*Principal*), Number of payments (*n*), and interest rate (*r*), loan payments can be calculated using the following formula:

$$Payment = Principal\ \frac{rate\ (\ 1 + rate\ )^n}{(1 + rate)^n - 1}$$

Notes:

- This formula makes no assumption about what a payment period is. We will use months.
- *rate* = rate per payment period. For monthly payments, make rate be the APR / 12.
- *n* = number of payments, i.e. months.
- *Principal* = the starting amount of the loan.

Write a Python function that will perform this calculation. The function should accept Principal, APR, and desired number of payments as arguments, and return the necessary monthly payment to make that happen.

Then, use this function (in your main function) to calculate the necessary monthly payment for:

- A loan of $20,000, APR of 4% (.04), to be paid off in 3 years (36 months)
- A loan of $20,000, APR of 4% (.04), to be paid off in 4 years (48 months)
- A loan of $20,000, APR of 4% (.04), to be paid off in 5 years (60 months)
- A loan of $20,000, APR of 4% (.04), to be paid off in 6 years (72 months)