8/8/25. 5:27 PM Code error breakdown



M What is a Mortgage?

A mortgage is a loan that you take from a bank to buy a house. You pay the loan back monthly with some interest added.

Formula to Calculate Monthly Mortgage Payment



***** Formula:

$$M = P \times \frac{r(1+r)^n}{(1+r)^n - 1}$$

Where:

Symbol	Meaning
М	Monthly payment (this is what we are calculating)
Р	Loan amount (principal)
r	Monthly interest rate (annual rate ÷ 12 ÷ 100)
n	Total number of monthly payments (years × 12)

Example:

Let's say:

- Loan amount P = 1,000,000 (1 million)
- Interest rate = 6% annually
- Loan period = 20 years

Step-by-step:

1. Convert annual interest rate to monthly:

$$r = \frac{6}{100 \times 12} = 0.005$$

2. Calculate total payments:

$$n = 20 \times 12 = 240$$
 months

3. Plug into the formula:

$$M = 1000000 \times \frac{0.005(1 + 0.005)^{240}}{(1 + 0.005)^{240} - 1}$$

You can calculate this using a calculator or in code.