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Homework Problem 2 Part C

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```
clear;  
clc;  
close all;
```

Variables

```
h = input('Total cost of the house: ');  
p = input('Downpayment on the house: ');  
r = input('Interest rate in percent form: ');  
y = input('How many years for the loan: ');
```

Calculations

```
P = h-p; %Finds principal payment  
r = r/100;  
M=P*(r/12)./(1-(1+r/12).^(-12*y)); % Monthly payment  
A = P*(1+r/12).^(12*y); % Total cost with loan  
K = A-P; % Difference in loan - not a loan
```

Outputs

```
fprintf('Your monthly payment is $%.2f for %d months\n', M, y.*12);  
fprintf('You will have to pay this much more by taking out a loan: $  
%.2f\n', K)
```

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