Example

Mr. Gilbert is considering buying a home for $255,000. As a first-time home buyer, Mr. Gilbert can make a 5% down payment on the house and take out a mortgage for the remaining balance. His mortgage broker found a bank offering an annual interest rate of 5.49% for a five-year fixed rate mortgage based on an amortization period of 25 years.

a. Determine the down payment and the amount to be mortgaged.

b. List the variables that you will input into the TVM solver.

c. Determine the monthly payment.

d. Determine the total amount paid over the course of the mortgage.

e. Determine the total amount of interest paid over the course of the mortgage.

f. Determine the amount of interest accumulated on the loan in the first month.

g. How much of the principal is paid off in the first payment?

h. How much debt is owed on the house after one month?

i. Determine the total amount paid over 5 years.

j. Calculate the total principal paid in the first 5 years of the mortgage.

k. Calculate the total interest paid in the first 5 years of the mortgage.

l. Calculate the debt owing on the house after the first 5 years.

m. Calculate the value of the house after 5 years if it has an appreciation rate of 5% per year.