

6.3 / #38

38. Loan amount: \$8000
Interest rate: 1.5 percent monthly

a. $8000 \times .015 = 120$

The interest on the \$8000 loan for the first month would be \$120.00 if the rate was 1.5 percent. I found this answer by multiplying 8000 by .015, which is 1.5% written in decimal form.

b. If none of the loan is paid by the consumer, at the end of the first month the consumer will owe \$8,120.00. They will owe the original borrowed amount along with interest.

c. At the end of 3 months, if no payments are made on the loan, the consumer will owe approx. \$8365.43 due to compound interest:

$$1.015 \times 8120 = \$8241.80 \rightarrow \text{end of second mo.}$$

$$1.015 \times 8241.80 = \$8365.427 \rightarrow \text{end of third mo.}$$

The amount for which interest is computed increases with each passing month.

d. $8000 \times 1.01 = 8080 \rightarrow$ first month
 $8080 \times 1.01 = 8160.80 \rightarrow$ sec. month
 $8160.80 \times 1.01 = 8242.41 \rightarrow$ third month

$$8365.43 - 8242.41 = \$123.02$$

The consumer will save \$123.02 if the loan of \$8000 for 3 months is obtained for a 1% interest rate as opposed to a 1.5% rate. I found this by computing the compound interest with 1% instead of 1.5%.