

Answer Question #67751 – Math – Financial Math

Question

A consumer charges a \$2,530.16 purchase on their credit card. The card has a daily interest rate of 0.042%. If the consumer pays off the balance at the end of 30 days, how much more in interest will they pay for the purchase?

Solution

To find the interest one uses the formula

$$I = P(1 + r)^t - P,$$

where P is the principal amount, r is interest rate and t is time.

According to the condition of the problem, $P = \$2530.16$, $r = 0.00042$ (or 0.042%), $t = 30$ (periods or days as the interest is calculated for each day).

Therefore, one gets

$$I = 2530.16(1 + 0.00042)^{30} - 2530.16 \approx \$32.07$$

Answer: \$32.07.