Possible Solutions

Calculate the simple interest earned and compare it to the compounded interest earned after 10 years if $5,500 is deposited into a savings account that earns 5.5% interest. What is the difference in the amounts earned? Round to the nearest cent, if necessary.

To Calculate Simple Interest

$I = prt$

$I = \$5,500 \cdot 0.055 \cdot 10$

$I = \$3,025$

$3,025 in simple interest over 10 years.

To Calculate Compounded Interest

$A = P(1+r)^t$

$A = \$5,500(1 + 0.055)^{10}$

$A = \$5,500(1.055)^{10}$

$A = \$9,394.79$ (rounded to two decimal places)

   $9,394.79   Total accrued amount

  - $5,500.00   Subtract original principal amount

   $3,894.79   Total compounded interest earned in 10 years

Difference in Interests Earned

$3,894.79   Total compounded interest earned in 10 years

- $3,025.00   Total simple interest over 10 years

$ 869.79   Difference in compounded interest compared to simple interest

***The inclusion of compounding other than annual compound interest is a district decision.*