

Find the future value, using the future value formula and a calculator. (Round your answer to the nearest cent.) \$858 at 5.5% compounded quarterly for 4 years.

Solution:

Future Value is the amount of money that an investment made today (the present value) will grow to by some future date. Since money has time value, we naturally expect the future value to be greater than the present value. The difference between the two depends on the number of compounding periods involved and the going interest rate.

The relationship between the future value and present value can be expressed as:

$$FV = PV \cdot (1 + i)^n$$

Where,

FV – Future Value=?

PV – Present Value= \$858

i – Interest rate per period= $\frac{5.5\%}{4}$

n – Number of compounding periods= 4×4

So, we can find the Future Value:

$$\begin{aligned} FV = PV \cdot (1 + i)^n &= \$858 \cdot (1 + 0.01375)^{16} = \$858 \cdot (1.01375)^{16} = \$858 \cdot 1.2442105 = \\ &= \$1067.53 \end{aligned}$$

FV = \$1067.53

Answer: The future value is \$1067.53.