

7.1.49 Question Help

How long would it take to double your money in an account paying 3% compounded quarterly?

Ignoring leap years, the investment will be doubled in 23 years and 70 days.  
(Round to the nearest whole number as needed.)

$$2P = P \left(1 + \frac{0.03}{4}\right)^{4t}$$

$$2 = (1.0075)^{4t}$$

$$\log 2 = \log [(1.0075)^{4t}]$$

$$\log 2 = 4t \cdot \log (1.0075)$$

$$\frac{\log 2}{4 \log (1.0075)} = t$$

$$t = 23.1914415162$$

↑  
years      fraction of year

$$0.1914415162 \times 365 = 69.88$$

ROUND UP TO 70 DAYS

Question is complete.

All parts showing

Similar Question

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