

## Chapter 7 / Example 7

# Using the finance app

- 1 Rafael invests BRL 5 000 (Brazilian real) in a bank offering 2.5% interest compounded annually.
  - a Calculate the amount of money he has after five years.  
After the five years, Rafael withdraws all his money and puts it in another bank that offers 2.5% interest per annum compounded monthly.
  - b Calculate the amount of money that he has in the bank after three more years.
- 2 Alexis invests RUB 80 000 (Russian rouble) in a bank that offers interest at 3% per annum compounded quarterly.
  - a Calculate how much money Alexis has in the bank after six years.
  - b Calculate how long it takes for his original amount of money to double.

Press **MENU** **C** **TVM** **Financial**.

Press **F2** Compound Interest.

Compound Interest  
 $n = 0$   
 $I\% = 0$   
 $PV = 0$   
 $PMT = 0$   
 $FV = 0$   
 $P/Y = 12$   
 [n] [I%] [PV] [PMT] [FV] [AMORTIZ]

$n = 5$ .  
 $I\% = 2.5$ .  
 $PV = -5000$ .  
 $PMT = 0$ .  
 $FV = 0$ .  
 $P/Y = 1$ .  
 $C/Y = 1$ .

Compound Interest  
 $n = 0$   
 $I\% = 0$   
 $PV = 0$   
 $PMT = 0$   
 $FV = 0$   
 $P/Y = 12$   
 [n] [I%] [PV] [PMT] [FV] [AMORTIZ]

Press **F5** FV to get the answer.

FV = BRL 5 657.04.

Compound Interest  
 $FV = 5657.041064$   
 [REPEAT] [AMORTIZ] [GRAPH]

Press **F1** REPEAT.

$n = 3$ .  
 $I\% = 2.5$ .  
 $PV = -5657.04$ .  
 $PMT = 0$ .  
 $FV = 0$ .  
 $P/Y = 1$ .  
 $C/Y = 12$ .

Compound Interest  
 $I\% = 2.5$   
 $PV = -5657.04$   
 $PMT = 0$   
 $FV = 0$   
 $P/Y = 1$   
 $C/Y = 12$   
 [n] [I%] [PV] [PMT] [FV] [AMORTIZ]

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Press **[F5]** FV to get the answer.

FV = BRL 6 097.16.

Compound Interest  
FV = 6097.158058

**[REPEAT]** **[AMORTZ]** **[GRAPH]**

Press **[F1]** REPEAT.

$n = 6$ .

$I\% = 3$ .

$PV = -80\,000$ .

$PMT = 0$ .

$FV = 0$ .

$P/Y = 1$ .

$C/Y = 4$ .

Compound Interest

$I\% = 3$

$PV = -80000$

$PMT = 0$

$FV = 0$

$P/Y = 1$

$C/Y = 4$

**[n]** **[I%]** **[PV]** **[PMT]** **[FV]** **[AMORTZ]**

Press **[F5]** FV to get the answer.

FV = RUB 95 713.08.

Compound Interest  
FV = 95713.08235

**[REPEAT]** **[AMORTZ]** **[GRAPH]**

Press **[F1]** REPEAT.

$n = 0$ .

$I\% = 3$ .

$PV = -80\,000$ .

$PMT = 0$ .

$FV = 160\,000$ .

$P/Y = 1$ .

$C/Y = 4$ .

Compound Interest

$I\% = 3$

$PV = -80000$

$PMT = 0$

$FV = 160000$

$P/Y = 1$

$C/Y = 4$

**[n]** **[I%]** **[PV]** **[PMT]** **[FV]** **[AMORTZ]**

Press **[F1]** n to get the answer.

$n = 23.19$ .

So it would take 23 years for his money to double.

Compound Interest  
 $n = 23.19144152$

**[REPEAT]** **[AMORTZ]** **[GRAPH]**