

Answer on question #53341 – Economics/Finance

A rich uncle gives you the choice of one of the following legacies:

- a. \$15,000 each year for the next 12 years
- b. \$13,000 each year for the next 18 years
- c. \$11,000 each year for the next 12 years plus a lump-sum payment \$81,000 at the end of the 18<sup>th</sup> year.

Which would you take and why?

Answer:

This formula was used for the calculations in all the variants:

$$FV = PV \times (((1+i)^n)-1)/i ,$$

where FV – future value;

PV – present value;

n – period;

I – rate of percent

a.  $FV = \$15,000 \times (((1+0,10)^{12})-1)/0,10 = \$320,764$

b.  $FV = \$13,000 \times (((1+0,10)^{18})-1)/0,10 = \$592,789$

c.  $FV = \$11,000 \times (((1+0,10)^{12})-1)/0,10 + 81,000 \times (1+0,10)^{18} = \$235,227 + \$450,353 = \$685,580$

I made the choice 'c', because I can get more money among three variants.