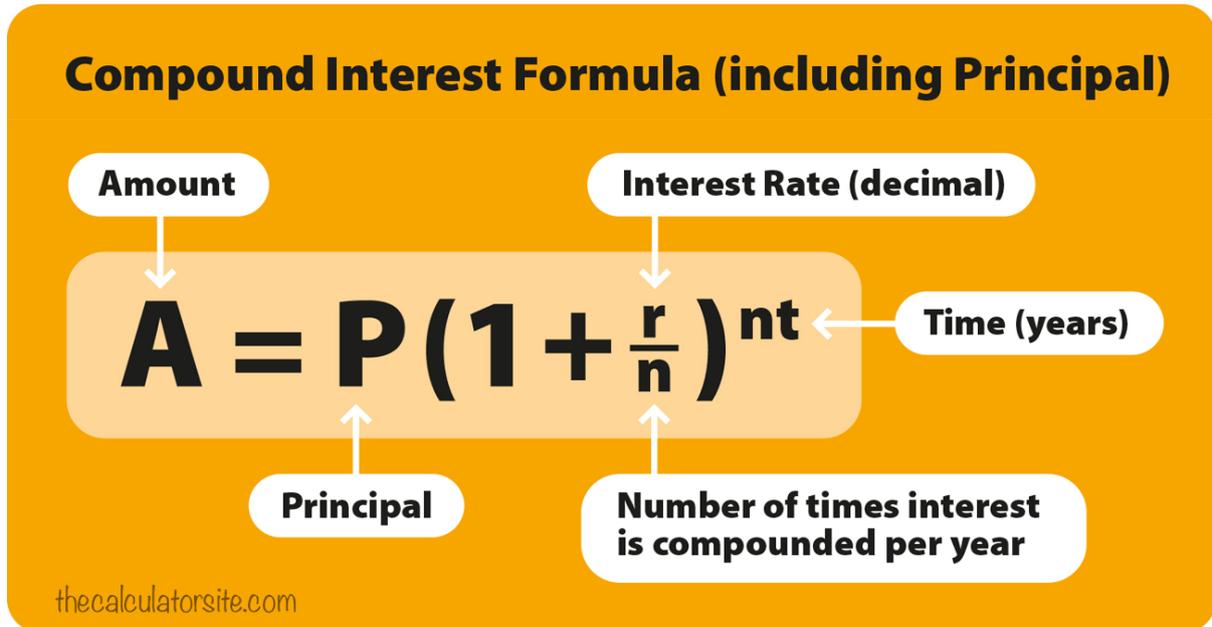


QUESTION

Fathiyya deposits RM6, 000 into a money market account which pays interest at a rate of 10% per year. What will the amount in the account be after 10 years?

ANSWER

The correct answer can be found out by using the so called formula for **Annual Compound Interest (ACI)**, which is represented in the picture below



Picture 1. Formula for **Annual Compound Interest (ACI)**

Where:

A = the future value of the investment, including interest

P = the principal investment amount (the initial deposit amount)

r = the annual interest rate (decimal)

n = the number of times that interest is compounded per year

t = the number of years the money is invested for

According to the formula ACI for our case $P=6,000$, $r=10/100=0.1$, $n=12$ (months in a year), $t=10$, so we should calculate A - the future value of investment in the following way

$$A = 6000 \cdot \left(1 + \frac{0.1}{12} \right)^{12 \cdot 10}$$

After doing some calculations we will get the answer $A=16,242.25$. So, after 10 years the amount in the account will be equal to RM16, 242.25.

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