Compound Interest Formula

Harry inherits $7600 on his 13th birthday. The money is invested into a G.I.C. that pays 3.75%/a compounded monthly. How much will it be worth on his 18th birthday?

Compound interest can sometimes apply to loans.   You can think of a loan as an savings investment from the bank's point of view.

Mr. Elliott doesn't pay off $2000 on his credit card bill. Interest is charged at a rate of 17.5% compounded daily. If he waits a whole year to back off the bill, how much will he owe?

We can also use the compound interest formula if we want to find interest or principle.

Example: Susan will start university in exactly 2 years. How much money must she invest right now (at 2.5%/a compounded monthly) to have exactly $4000 to pay her tuition. (This amount is often referred to as the ***present value*** of the investment).

Example

Gerry has a savings account that pays interest compounded monthly. He deposits $5000 into the account. Two years later the account has a balance of $5152.18. What interest rate did the savings account pay?

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