

The payday loan

(by Alan Champneys)

Loans-R-Us, a so-called pay-day loan shop, is offering three different interest rates

(c) 3500% per year, (a) 35% per month, (b) 1% per day,

Interest is charged at the beginning of each period. So that if I borrow £1 for just one hour, I would pay £1.01 if I were to choose interest rate (a), £1.35 under rate (b), and £37 under rate (c). Each time interest is charged, it is calculated on the whole amount owed, including any unpaid interest.

Calculate the total amount I would owe under each interest rate, if I were to borrow £1 for a whole year, under each interest rate scheme. Which interest rate should I choose?

Suppose I choose rate (c) and borrow £1 for 5 years. How much would I owe at the end of 5 years?

What if I were to only pay back after 10 years? where could I find such money from?