Class Discussion

Unit 3 Topic 1 Part 2 Exponential Functions 2

Compound Interest Model

$$A = P(1 + \frac{r}{n})^{nt}$$

P: principle (initial deposit)

A: balance (total amount after the time of investment)

r: Annual rate (yearly rate, proportionally distributed if it is monthly, daily, ..)

n: compound frequency (how often is the balance calculated in an year)

t: time in years

Ex 1: Bank of America gives the saving's account 2% interest compound quarterly. If Jeremy deposits $3000 in a saving's account. How much will his balance become in 5 years?

Ex 2: A credit card company charge 22% APR and compound balance daily. Jonah carries a balance of $2000 on the credit card at the beginning of the billing cycle. 10/5/2017. If he decides to pay $500 towards the balance at the beginning of each month,

1. can he pay off by the new year's day next year?

2. when can he pay it off?