



Credit Card Balances: How long do they last?

6-2

Advantages of Credit Cards

- 1. Convenient and simple
- 2. Delay payments until a certain date
- 3. Record of purchases is made
- 4. Lower danger of losing cash
- 5. Easy to order online, by phone, or mail
- 6. Better services if you become a valued customer
- 7. Help take advantage of sales
- 8. Cash advance

Disadvantages of Credit Cards

- 1. Overspending
- 2. Forget purchases until end of month
- 3. Unauthorized purchases (credit card number, name)
- 4. Stolen – notify credit card company ASAP. You may be liable for unauthorized charges.

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"I'm afriad I'll have to validate your card with my supervisor... I won't keep you a moment, Mrs Camilla Gilbertson Boothby... the Third."

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Skill 1

- Common logarithm function
 - $y = \log_{10} x$
 - “y represents the exponent to which the number ten must be raised to obtain x”
 - $\text{Log}_{10} 100 = ?$
 - 2 since 10^2 is 100

Time- to - Pay- off - Formula

$$n = \frac{\log\left(\frac{M}{M - P \frac{r}{12}}\right)}{\log\left(1 + \frac{r}{12}\right)}$$

Where P = amount of loan

r = interest rate

M = monthly payment

n = number of payment periods

Example 1

- Snooki has a balance of \$3200 on her MasterCard. That has an APR of 18%. She can afford monthly payments of \$120.
- If she makes no other purchases, how long will it take her to pay off the balance?

Example 2

- Snooki just booked season 2 of Snooki & Jwoww so she can afford to make monthly payments of \$250 instead of \$120.
- How long will it take her to pay of her bill if she makes monthly payments of \$250 instead of \$120?

- When would you want to pay off a credit card balance before a certain event?



Skill 2

- Monthly Payment Formula for Paying Off Balance

$$M = \frac{P \frac{r}{12} \left(1 + \frac{r}{12}\right)^n}{\left(1 + \frac{r}{12}\right)^n - 1}$$

- Alex is graduating from the Naval Academy in 3 years. He would like to pay off his credit card bills before he has to start paying off students loans.
- His current balance is \$3300 and his card carries an APR of 24%, how large will his monthly payment be if the balance is to be paid off in 3 years?

- Kara is starting nursing school in 2 years. She wants to pay off her credit card balance before she has to start buying scrubs and stethoscopes.
- Her current balance is \$1616 and her card carries an APR of 20%, how large will her monthly payment be if the balance is to be paid off in 2 years?



- If you determine that it will take 7.2 months to pay off a credit balance, why would you round your answer to 8 months instead of 7 months?
- Why is paying off a credit card similar to making payments on an installment bank loan?

- HOMEWORK:

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