

4.9 Credit Cards

Introduction to Credit Cards

Use the words from the following word box to complete the statements in the next two sections below

bills	cash advances	daily	interest	rates
buyer	charges	full	merchant	seller

HOW DO CREDIT CARDS WORK?

- The customer (buyer) presents the credit card to the merchant (seller)
- The merchant charges the credit card company for the cost of the item
- The credit card company bills the customer's credit card for the amount

HOW DO CREDIT CARD COMPANIES MAKE MONEY?

1. Charge the customer interest if the bill amount is not paid off in full
2. Charge the customer immediate interest on cash advances
3. Set high interest rates and compound interest daily on unpaid balances
4. Charge the merchant a small amount (2-3%) for each purchase made

MAKING CREDIT CARD PAYMENTS & HOW CREDIT CARD COMPANIES CHARGE INTEREST

- From the time your bill arrives companies offer a 21 day grace period before they charge interest (any interest charged is added to your next bill)
- If you pay your balance IN FULL by the due date you will not incur any interest
- Credit card companies REQUIRE you to make a minimum payment
- The **minimum payment** is usually a percentage of your balance (i.e. 5%) **OR** a set amount (i.e. \$20) whichever is **MORE**
- If you **do not** pay your bill IN FULL (pay all of it by the due date);
 - Simple interest is charged from the date of purchase until the due date of the bill
 - After that, interest is compounded daily until the balance is paid off

CREDIT CARD PAYMENTS & INTEREST EXAMPLE

Suppose you buy a \$545 bike (plus tax) using your credit card on March 2nd.
No other purchases are made using your credit card.

Interest of
18.9%

- a) If you receive your credit card bill on March 15 what will be the due date on the bill?

Due date = 21 days after statement date (date you get bill)

∴ March 15 + 21 days = Apr 5.

- b) If your credit card company requires a minimum payment of 4% of your balance OR \$20, whichever is more, what will be your minimum payment due?

$$545 \times 1.13 = 615.85 \quad (\text{Price including tax})$$

$$615.85 \times 0.04 = 24.63$$

Since \$24.63 > \$20, the minimum payment due is \$24.63

- c) If you forget to pay your bill until April 10, at which time you pay the entire balance, how much interest will be charged (added to your next bill)?

Apr 10 is 5 days after the due date

∴ simple interest is charged from Mar 2 to Apr 5 (34 d)

compound interest is charged from Apr 5 to Apr 10 (5d)

$$\begin{aligned} I &= Prt \\ &= 615.85(0.189)\left(\frac{34}{365}\right) \\ &= 10.84 \end{aligned}$$

$$\begin{aligned} A &= P(1+i)^n \\ &= 615.85 \left(1 + \frac{0.189}{365}\right)^5 \\ &= 617.45 \\ I &= A - P \\ &= 617.45 - 615.85 = 1.60 \end{aligned}$$

$$\begin{aligned} \text{Total Interest} \\ &10.84 + 1.60 \\ &= 12.44 \end{aligned}$$

CREDIT CARD FEATURES

- Some offer lower interest rates
- Some offer rewards programs (travel rewards, cash back, retail purchases, etc.)

Example: A credit card offers 2% cash back on all purchases. Over time, how much would you need to spend to get \$50 cash back?

Let x be the amount you need to spend

$$x(2\%) = \$50.00$$

$$x(0.02) = 50$$

$$x = \frac{50}{0.02}$$

$$x = 2500$$

∴ You would need to spend \$2500 to get \$50 cash back.

Finish example
on worksheet.