Unit 4 · Credit Cards & Debt Cheat Sheet

Unit 4 focus: read card terms, estimate interest and understand utilization

1 CARD VOCABULARY

Term	Meaning / quick example
APR	Annual percentage rate; interest model starts here.
Statement balance	Amount owed at billing-cycle close.
Minimum due	Smallest required payment; not a payoff plan.
Grace period	May avoid purchase interest when terms are met; not universal.

2 MONTHLY INTEREST MODEL

$i = \frac{r}{12}$; $I = Bi$. r = annual APR as a decimal; B = balance dollars; i = monthly rate.

Example: \$3,000 balance at 24.99% APR.

Monthly rate: $\frac{0.2499}{12} = 0.020825$

Interest: $3{,}000(0.020825) = 62.475$

Answer: About \$62.48 for month one

3 DAILY BALANCE METHOD

Some cards use daily balances rather than the simple monthly model.

$$\text{ADB} = \frac{\sum(\text{balance} \times \text{days})}{\text{cycle days}}$$

\$1,000 for 10 days; \$600 for 20 days:

$\frac{1{,}000(10) + 600(20)}{30} \approx 733.33$

\$733.33 average daily balance

ADB = average daily balance in dollars; follow the card's actual interest terms.

4 WHAT THE MINIMUM DOES

Fictional minimum rule: 1% of balance plus interest; no floor or new charges in this example.

Example: \$3,000 at 24.99%; first-month interest \$62.48.

Principal part: $0.01(3{,}000) = 30$

Minimum: $30 + 62.48 = 92.48$

Next balance: $3{,}000 + 62.48 - 92.48 = 2{,}970$

Answer: Only \$30 of principal paid off

5 FIXED-PAYMENT PAYOFF

$$D = \frac{Pi}{1 - (1+i)^{-N}}$$

P = starting debt dollars; i = monthly decimal rate; N = number of monthly payments; D = dollars paid monthly.

\$3,000 at 24.99% APR over 26 months:

$D \approx 150.60$

Plan about \$150.60 monthly

Assumes fixed rate, no fees or new charges; final payment adjusts. At zero rate, $D = \frac{P}{N}$.

6 CREDIT UTILIZATION

$\text{Utilization} = \frac{\text{reported balance}}{\text{credit limit}} \times 100\%$. Calculate per card and in total.

Example: \$900 reported balance; \$3,000 limit.

Rate: $\frac{900}{3{,}000} \times 100\% = 30\%$

If balance falls to \$300: $\frac{300}{3{,}000} \times 100\% = 10\%$

Answer: 30% becomes 10%

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More practice: compare repayment and transfer choices

1 TWO REPAYMENT STRATEGIES

Method	How it works
Avalanche	Pay minimums on all debts; send extra to highest APR first.
Snowball	Pay minimums on all; send extra to smallest balance first.

With equal total payments, fixed rates and no special fees, avalanche minimizes interest. Snowball may help motivation. Check promotional deadlines and penalties too.

2 WHICH DEBT GETS EXTRA?

Both $1,000 debts remain for one month; minimums paid separately. A is 24% APR; B is 12%.

Example: Apply $100 extra principal now.
To A: $100(\frac{0.24}{12}) = 2$ saved next month
To B: $100(\frac{0.12}{12}) = 1$ saved next month

Answer: A saves $1 more interest

3 IS A TRANSFER BETTER?

Owe $2,000; repay $200 principal monthly for 10 months. Interest uses each month's opening principal; no new charges.

Example: Keep 24% APR or transfer at 0% for 10 months with a 3% fee paid upfront?
Keep: $(2{,}000 + 1{,}800 + \cdots + 200)(0.02) = 220$ interest
Transfer: $2{,}000(0.03) = 60$ fee

Answer: Transfer saves $160 in this model

4 BEFORE TRANSFERRING

- Can you finish before the promotional rate ends?
- What APR applies afterward?
- Is the fee paid upfront or added to the debt?
- Does a missed payment change the offer?
- Is it 0% APR or deferred interest with different terms?
- The transfer example favors 0% only because repayment finishes on time; behavior and contract terms matter.

5 A PRACTICAL CARD ROUTINE

- Check the statement for unfamiliar charges.
- Know the due date, APR and annual fee.
- If possible, pay the full statement balance by the due date to preserve a purchase grace period.
- Autopay at least the minimum can help avoid missed payments; keep enough cash in the account.
- Stop new charges while paying down costly debt.

6 REMINDERS & MISTAKES

✓ Do remember

- Paying interest is not required to build credit.
- Lower utilization can help; there is no guaranteed score cutoff.

✗ Common mistakes

- APR used as monthly rate: convert annual to monthly.
- Minimum means recommended: it is only a requirement.
- 0% means no cost: check transfer fees and deadlines.
- Rewards offset all costs: interest and fees can exceed rewards.