Unit 3 · Banking & Saving Cheat Sheet

Unit 3 focus: choose accounts, calculate interest and spot fees

1 ACCOUNTS & SAFETY

Term	Meaning / quick example
Checking	Frequent payments and deposits.
Savings	Accessible reserves; rate may change.
CD	Term deposit; early access may carry a penalty.
Deposit insurance	Eligible deposits at an insured institution; not protection from investment losses.

2 LOOK PAST THE HEADLINE RATE

Item	Ask before opening
APY	Annual yield including compounding; variable or fixed?
Fees	Monthly, ATM, overdraft, minimum balance?
Access	Transfer limits, holds and withdrawal timing?
Protection	Verify institution, ownership category and applicable insurance limits.

A high rate may not offset fees or a penalty when you need the cash early.

3 SIMPLE INTEREST

$I = Prt$; $A = P + I$. P = principal dollars, r = annual decimal rate, t = years; I = interest dollars.

Example: $2,000 at 4% simple interest for 18 months.

Time: $t = \frac{18}{12} = 1.5$ years

Interest: $2{,}000(0.04)(1.5) = 120$

Answer: $120 interest; $2,120 balance

4 COMPOUND INTEREST

$$A = P\left(1 + \frac{r}{m}\right)^{mt}$$

P = initial dollars; r = annual nominal decimal rate; m = compounds per year; t = years.

$1,000 at 4% nominal, monthly for 1 year:

$1{,}000(1 + \frac{0.04}{12})^{12}$

Balance ≈ $1,040.74

No deposits, withdrawals or fees; rate stays fixed.

5 APY VS. NOMINAL RATE

$$\text{APY} = \left(1 + \frac{r}{m}\right)^{m} - 1$$

r = annual nominal decimal rate; m = compounds per year.

At 4% nominal compounded monthly:

$(1 + \frac{0.04}{12})^{12} - 1 \approx 0.040742$

APY ≈ 4.0742%

APY is already annual; do not compound it monthly again.

6 CD PENALTY

Course contract: penalty equals 3 months of simple interest on principal. Contract terms vary.

Example: $2,000 at 4%; withdraw after 9 months.

Earned: $2{,}000(0.04)(\frac{9}{12}) = 60$

Penalty: $2{,}000(0.04)(\frac{3}{12}) = 20$

Answer: $40 interest kept; $2,040 returned

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More practice: compare savings options and reconcile a statement

1 WHICH ACCOUNT IS BETTER?

Assume constant $1,000 balance for 1 year. Rates below are APYs; no tax, other fees or balance changes.

Example: A: 4% APY, $5 monthly fee. B: 3% APY, no fee.
A net interest: $1{,}000(0.04) - 12(5) = -20$
B net interest: $1{,}000(0.03) = 30$

Answer: B leaves you $50 better off

2 FEE BREAK-EVEN

For the accounts above, A pays 1 percentage point more but charges $60 yearly.

$$\text{Break-even balance} = \frac{60}{0.04 - 0.03}$$

$6,000 constant balance

Above $6,000, A earns more under this model; below it, B does. Fee waivers, changing balances and access needs can change the choice.

3 STATEMENT VOCABULARY

Term	Meaning / quick example
Deposit in transit	Recorded by you, not yet by bank.
Outstanding payment	Recorded by you, not yet cleared.
Reconciliation	Explain differences between bank and your record.
Available balance	May differ from statement balance due to pending items or holds.

4 RECONCILE THE ACCOUNT

Subtract outstanding payments; add deposits in transit to the bank statement balance.

Example: Bank $1,250; uncleared check $80; deposit in transit $200.
Adjusted bank: $1{,}250 - 80 + 200 = 1{,}370$
Your record: $1,385 minus unrecorded $15 bank fee
Adjusted record: $1{,}385 - 15 = 1{,}370$

Answer: Both records agree at $1,370

5 MATCH PRODUCT TO PURPOSE

- Daily bills: accessible checking with manageable fees.
- Emergency fund: liquid savings with dependable access.
- Known future date: compare a CD term with that date.
- Check insurance and ownership limits directly.
- Use alerts, protect login details and review statements; report unexpected transactions promptly.

6 REMINDERS & MISTAKES

✓ Do remember

- Convert months to years in simple interest.
- Read the early-withdrawal terms before choosing a CD.

✗ Common mistakes

- Highest APY always wins: include fees and access.
- Deposit insurance covers stocks: it does not insure market losses.
- Statement = spendable cash: pending items can change it.
- APR = APY: compounding may make them differ.