

The Case of the Credit Card That Charged 24 Percent

A \$5,000 balance, a \$150 minimum payment, and nineteen and a half years to pay it off. One complete case file from Unit 9 of the workbook, with its graph of real numbers, the unit assessment, a self-grading Google Form, and the full answer key.

What students learn

- How a credit card works as a loan, and why the grace period makes it free for anyone who pays in full
- How an APR becomes a daily rate, and how unpaid interest compounds against the borrower
- The minimum-payment formula worked to the dollar: 234 months and about \$8,887 in interest on \$5,000
- Why card rates are high, and the forms of credit that cost far more (payday, title, rent-to-own)
- The habits that let a person use a card without paying a cent of interest

How to use it (about two class periods, or two days at home)

- **Day 1.** The student reads the case file (pages 2–7 of this PDF) and works the Look at the Data page (page 8): three payoff plans for the same \$5,000 balance.
- **Day 2.** The student answers the 13 assessment questions, either on paper (pages 10–12) or in the self-grading Google Form. Multiple-choice questions grade themselves; the two written questions are scored with the key.
- **Optional.** The Investigate It page (page 9) sends the student to the Federal Reserve's G.19 release and a payoff calculator to run the numbers on a real rate.

The self-grading Google Form

Open [this link](#) and click **Make a copy**. The form lands in your own Google Drive, so responses stay in your account. Assign the copy in Google Classroom or send the link. Scores appear in the Responses tab; model answers for the written questions show after submission.

Grading

Questions 1–11 are multiple choice, one point each. Questions 12 and 13 are written; score each out of 5 using the model answers on the last page (claim, evidence from the case, reasoning that connects them). Total 21 points; 17 or more shows mastery.

Standards

National Standards for Personal Financial Education: Managing Credit. Voluntary National Content Standards in Economics 12 (interest rates). C3 Framework D2.Eco.1.9-12 and D2.Eco.2.9-12. Common Core RH.9-10.7 (integrating quantitative data) and WHST.9-10.1 (written arguments).

This is 1 of 21 case files. The full workbook runs a complete semester: twelve units from scarcity and supply and demand through paychecks, budgets, credit, cars, college, saving, investing, and insurance, with 200 one-page daily warm-ups and a full answer key. [See the book](#).

Case File

The Case of the Credit Card That Charged 24 Percent

A credit card statement shows a \$5,000 balance, a 24 percent interest rate, and a minimum payment of \$150. The cardholder pays exactly that, every month, on time, and never uses the card again. The balance is gone in 234 months: nineteen and a half years. Total paid, about \$13,900. The interest, about \$8,900, came to more than the purchases did. Nothing was hidden and no law was broken. The Federal Reserve's G.19 release puts the average rate on card accounts charged interest at about 22 to 23 percent in 2024 and 2025, the highest on record, and the New York Fed counts about \$1.2 trillion in card balances, nearly half of them carried month to month. How a \$150 payment can take two decades, who designed it that way, and what the same cardholder could have done with an extra \$100 a month is the subject of this case.

The Balance That Would Not Go Down

What Happened. A cardholder owes \$5,000 on a credit card with a 24 percent interest rate. The statement asks for a **minimum payment** of \$150. The cardholder pays it every month, on time, and never charges another dollar. Nineteen and a half years later the card is paid off. Total paid: about \$13,900. The interest alone, about \$8,900, came to more than the original \$5,000. Nothing illegal happened. The card did exactly what the fine print said, and the cardholder followed the one instruction printed in the largest type on the statement: the minimum payment due.

How Common This Is. The Federal Reserve's G.19 release tracks the average interest rate on credit card accounts that are actually charged interest. Through 2024 and 2025 that figure ran between about 22 and 23 percent, the highest level in the three decades the series has been collected, and cards offered to borrowers with lower credit scores commonly carry 24 to 29 percent. The New York Fed's Household Debt and Credit Report put total American credit card balances at roughly \$1.2 trillion in 2025, and surveys by the Federal Reserve and Bankrate find that 45 to 50 percent of cardholders carry a balance from one month to the next.

What This Case File Does. It opens a credit card statement line by line, works the \$5,000 example to the dollar, explains why card rates are so high, surveys the forms of credit that are worse, and ends with the habits that let a person use a card for free. The Unit 7 paycheck case explained where a paycheck goes; the Unit 8 household budget case showed how to budget what is left. This case file is about what happens when the budget runs short and plastic fills the gap.

How a Credit Card Actually Works

A Card Is a Loan. When a card is swiped, the issuing bank pays the merchant and the cardholder now owes the bank. A **credit card** is a pre-approved, reusable loan up to a **credit limit**. A **debit card** looks identical but takes money directly out of a checking account; no loan is made and no interest can be charged. The two cards feel the same at the register and are opposites underneath.

The Billing Cycle. Once a month the bank sends a **statement** listing every purchase, the **statement balance** (the total owed on the closing date), the minimum payment, and a **due date** at least 21 days after the statement is mailed. The window between purchase and due date is the

grace period, the single most valuable feature of a credit card: pay the full statement balance by the due date and no interest is charged on any of those purchases. A cardholder who always pays in full borrows thousands of dollars a year at zero percent.

When the Grace Period Disappears. Pay anything less than the full statement balance and the grace period is gone, usually for new purchases too. Interest accrues on the remaining balance and on every new charge from the day it posts, until the account is again paid in full. A person who pays \$490 of a \$500 statement is not charged interest on \$10; they are charged interest on everything carried through the next month.

What the Statement Must Show. Since 2010 every statement carries a **minimum payment warning** box: how long the balance will take to pay off at the minimum and what it will cost, beside the monthly payment that would clear it in three years. For \$5,000 at 24 percent the box would say roughly: minimum payments, about 19 years, about \$13,900 total; or \$196 a month, 3 years, about \$7,060 total. Congress required it in 2009 because most cardholders had no idea what the minimum payment actually cost them.

APR, the Daily Rate, and Interest That Compounds the Wrong Way

The Rate Has Three Forms. The number on the offer is the **annual percentage rate**, or APR: 24 percent here. Nobody is charged 24 percent once a year. The bank converts it to a **daily periodic rate** by dividing by 365: $24 \div 365 = 0.0658$ percent per day, charged on the balance every day and posted at the end of the cycle as one interest charge. This case file uses the monthly equivalent, $24 \div 12 = 2$ percent per month, which gives nearly the same answer.

Average Daily Balance. Because the balance changes as purchases and payments post, the bank applies the daily rate to the **average daily balance** for the cycle. A \$1,000 balance carried for 30 days at 24 percent costs $1,000 \times 0.000658 \times 30$, about \$19.73. A payment made on day 5 instead of day 25 lowers the average balance and the interest, which is why paying early in the cycle, not just on time, saves money for anyone carrying a balance.

Compounding. Interest that is not paid is added to the balance, and next month's interest is computed on the larger number. This is **compound interest**, the same force that the Unit 11 savings case shows building a twenty-year-old's savings into a fortune. The mathematics is identical; only the direction changes. For the saver, interest earns interest. For the borrower, interest is charged on interest. A card balance at 24 percent, left untouched, doubles in about three years; a savings account at 4 percent takes about seventeen years to do the same. The borrower's compounding runs six times faster than the saver's, and it runs against them every day.

The Minimum Payment, Worked to the Dollar

The Formula. Most issuers set the minimum payment as **1 percent of the balance plus that month's interest** (and any fees), with a floor of \$25 to \$35 if the formula produces less. Some use a flat 2 or 3 percent of the balance. The 1-percent-plus-interest design is the most common and produces the longest payoff.

Month One. Balance \$5,000. Interest at 2 percent: \$100. Minimum: 1 percent of \$5,000 (\$50) plus \$100 of interest, \$150. Of the \$150 paid, \$100 went to the bank as interest. The balance fell by \$50, to \$4,950.

Month Two. Interest on \$4,950: \$99. Minimum: \$49.50 plus \$99, \$148.50. Balance after payment: \$4,900.50. The payment got smaller because the balance got smaller, which sounds like progress and is the opposite: every month the principal paid shrinks and the schedule stretches.

The Full Run. Carry the arithmetic forward, applying a \$25 floor once the formula drops below it:

- Time to pay off: 234 months, 19 years and 6 months.
- Total interest paid: about \$8,887.
- Total paid: about \$13,887, for \$5,000 of purchases.
- With a \$35 floor the schedule shortens to about 17 years and \$8,400 of interest; with a 2-percent-plus-interest formula, to about 11.5 years and \$4,600. The issuer's design choice alone moves the cost by thousands.

The Alternative. Hold the payment at the original \$150 instead of letting it fall: the balance is gone in 56 months, 4 years and 8 months, with about \$3,322 in interest. Pay a fixed \$250: 26 months and about \$1,449. The difference between the minimum and a fixed \$250 is seventeen years and about \$7,400, and the two cardholders differ by \$100 a month, less than many people spend on streaming subscriptions (Unit 8, household budget case).

Why the minimum is set this way. A low minimum is not a kindness. The bank's revenue comes largely from interest on balances carried, and the minimum is the smallest payment that keeps the account current without clearing it. Before 2003 some minimums were so low that balances grew even when the borrower paid on time, a condition called **negative amortization**. Regulators ordered it ended, and the 1-percent-plus-interest formula is the result: the balance always falls, but as slowly as the rules allow.

Why Card Rates Are So High

Unsecured. A mortgage is backed by a house and a car loan by a car; if the borrower stops paying, the lender takes the asset (Unit 10, car case). A credit card is **unsecured**: there is nothing to repossess. On default the bank's only recourse is collection calls, a lawsuit, and a mark on the credit report (credit score case, this unit). The spread between a 7 percent mortgage and a 24 percent card is mostly the price of having no collateral.

Charge-Offs. When a balance goes 180 days without payment, the bank writes it off as a loss, a **charge-off**. Federal Reserve data put the charge-off rate on bank credit cards at roughly 4 to 4.5 percent of balances per year in 2024 and 2025, several times the rate on mortgages or auto loans. Every dollar charged off is covered by interest from borrowers who do pay; the responsible cardholder's 24 percent is partly a subsidy for the defaults of strangers.

The Prime Rate Plus a Margin. Nearly all card APRs are **variable**: the **prime rate**, which moves with the Federal Reserve's policy rate, plus a **margin** set by the issuer from the cardholder's credit score. When the Fed raised rates in 2022 and 2023, every variable-rate card rose with it. The Consumer Financial Protection Bureau found that issuers also widened the margin itself to the largest gap over prime on record, which it estimated cost cardholders more than \$25 billion a year in extra interest.

Rewards Are Not Free. Cash back, miles, and points are funded two ways. The first is **interchange**, a fee of roughly 2 percent of every purchase that the merchant pays to the card network and issuing bank and folds into the prices everyone pays, cash customers included. The second is interest from

revolvers. A rewards program is a transfer from the people who carry balances, and from everyone who shops, to the people who pay in full.

Revolvers, Transactors, and a Trillion-Dollar Balance

Two Kinds of Cardholder. A **transactor** pays the statement balance in full every month and pays no interest; the bank earns only interchange from them. A **revolver** carries a balance and pays interest on it. By the Federal Reserve's survey of household economics, roughly half of cardholders were revolvers at some point in the past year, and Bankrate's polling puts the share carrying debt month to month in the high 40s. The split is not fixed: a transactor becomes a revolver with one short month.

The National Total. Credit card balances in the New York Fed's quarterly report crossed \$1 trillion for the first time in 2023 and reached about \$1.2 trillion in 2025. Card debt is a modest slice of the roughly \$18 trillion in total household debt, most of which is mortgages, but it is the slice with the highest rate and the highest delinquency: the share of card balances 90 or more days late rose above 10 percent in 2024 and 2025, higher than any other kind of household loan.

Who Carries the Balance. The most common reason households carry a balance is an expense they could not cover from income or savings: a car repair, a medical bill, a gap between jobs. A household with an emergency fund (Unit 12, \$400 emergency case) absorbs the \$1,500 repair at zero percent; a household without one absorbs it at 24 percent and may still be paying when the next repair comes.

The Rest of the Credit Menu: BNPL, Payday, and Title Loans

Buy Now, Pay Later. At online checkouts a purchase can be split into four payments over six weeks with no interest; the merchant pays the BNPL company a fee, so the loan is free to a borrower who pays on schedule. The risks: the loans are easy to stack, most build no credit history, and a missed payment brings late fees and often an automatic charge to a linked debit card that can trigger an overdraft. CFPB studies have found that a large share of BNPL users hold several loans at once and skew younger and more likely to carry other high-cost debt. A free loan that encourages purchases a person would not otherwise make is not free.

Payday Loans. A **payday loan** is a small cash advance, typically \$100 to \$500, due in full on the next payday. The fee is usually \$15 per \$100 for two weeks. That sounds like 15 percent; as an annual rate it is about 391 percent, and the CFPB documents typical APRs of 300 to 400 percent. The business model depends on **rollovers**: the borrower cannot repay on payday, pays the fee again to extend, and repeats. The CFPB found that most payday fees come from borrowers who re-borrow ten or more times. About twenty states cap small-loan rates at levels that effectively prohibit the product.

Auto Title Loans. An **auto title loan** uses the borrower's paid-off car as collateral, usually at about 25 percent per month, roughly 300 percent APR. The lender's remedy on default is repossession. A CFPB study found that about one in five title borrowers eventually lost the vehicle, often the means of getting to the job that was supposed to repay the loan.

The Pattern. Each product is sold to people priced out of the one above it. The way off the ladder is a credit score (credit score case, this unit) good enough for the cheapest credit and an emergency fund (Unit 12, \$400 emergency case) large enough to not need it.

Banking Basics: The Account Under the Card

Checking and Savings. A **checking account** is for money that moves, usually paying little or no interest. A **savings account** is for money that stays, paying interest. Online banks and credit unions have recently paid 4 percent or more on savings while many large banks paid under 0.1 percent; the difference on a \$5,000 emergency fund is about \$200 a year, for the same federal protection.

FDIC Insurance. Bank deposits are insured by the Federal Deposit Insurance Corporation up to \$250,000 per depositor, per bank, per ownership category; credit unions carry the same coverage through the NCUA. The guarantee dates from 1933, when Congress created the FDIC after thousands of banks failed in the Great Depression. Money in an insured account cannot be lost to a bank failure, which makes it the right home for an emergency fund.

Overdraft Fees. If a debit purchase or a check exceeds the checking balance, the bank may cover it and charge an **overdraft fee**, historically about \$35. A \$4 coffee that overdraws an account by \$1 becomes a \$39 coffee. Banks collected about \$12 billion a year in overdraft fees before 2020; after CFPB scrutiny several large banks cut or dropped them and the total fell to roughly \$6 billion by 2023. The protection: decline overdraft coverage on debit purchases (the bank needs your consent to enroll you), link savings as a backup, keep a cushion in checking.

Using a Card Well

The Case for Having One. A card used correctly builds the credit history that the credit score case in this unit shows sets the price of a car loan, an apartment, and a mortgage, and it offers stronger fraud protection than a debit card. The question is not whether to have a card but how to be a transactor rather than a revolver.

The Rules:

- **Pay the Statement Balance in Full**, every month. Full payment keeps the grace period alive and makes the interest rate irrelevant.
- **Set autopay** for the full statement balance. A late payment costs a fee of up to about \$30 to \$40, can trigger a **penalty APR** near 30 percent, and stays on the credit report for seven years.
- **Keep Utilization Low.** The share of the credit limit in use, **credit utilization**, is a major input to the credit score. Below 30 percent of the limit is the common guideline; below 10 percent is better.
- **Treat the limit as the bank's number, not yours.** The limit is what the bank is willing to lose. The budget from the Unit 8 household budget case is the spending ceiling; the card is only the payment method.
- **If a balance exists, attack it first.** Paying down card debt is a guaranteed 24 percent return. No savings account, bond, or index fund (Unit 11, savings case) reliably pays that. Paying off the card before investing is not caution; it is the better investment.
- **Read the Warning Box.** It is the bank telling the truth about its own product.

A Short History of the Card

1950. A businessman who had forgotten his wallet at a New York restaurant founded Diners Club, a cardboard card accepted at a few dozen restaurants and paid in full each month: a charge card, with no balance carried.

1958. Bank of America mailed 60,000 unsolicited BankAmericards to households in Fresno, California, the first general-purpose card with a revolving balance and interest. It became Visa in 1976; a rival bank group's Master Charge became Mastercard.

1968 **and** 1974. The Truth in Lending Act required every lender to state the cost of credit as an APR. The Fair Credit Billing Act gave cardholders the right to dispute charges and capped liability for stolen cards at \$50.

1978. In *Marquette National Bank v. First of Omaha*, the Supreme Court ruled that a national bank could charge the rate allowed in its home state to customers anywhere in the country. South Dakota and Delaware repealed their rate caps, Citibank moved its card operations to Sioux Falls in 1981, and state **Usury laws** that had capped card rates at 12 to 18 percent became unenforceable against out-of-state banks. The modern high-rate card was born.

1988. The Fair Credit and Charge Card Disclosure Act required the standardized rate-and-fee table on every card offer, known as the **Schumer box**.

2009. The Credit CARD Act banned retroactive rate increases on existing balances, required 45 days' notice of rate changes, directed payments above the minimum to the highest-rate balance first, limited fees, required the 21-day window and the minimum payment warning box, and barred cards to anyone under 21 without proof of income or a co-signer. The CFPB later estimated the law saved cardholders billions of dollars a year in fees.

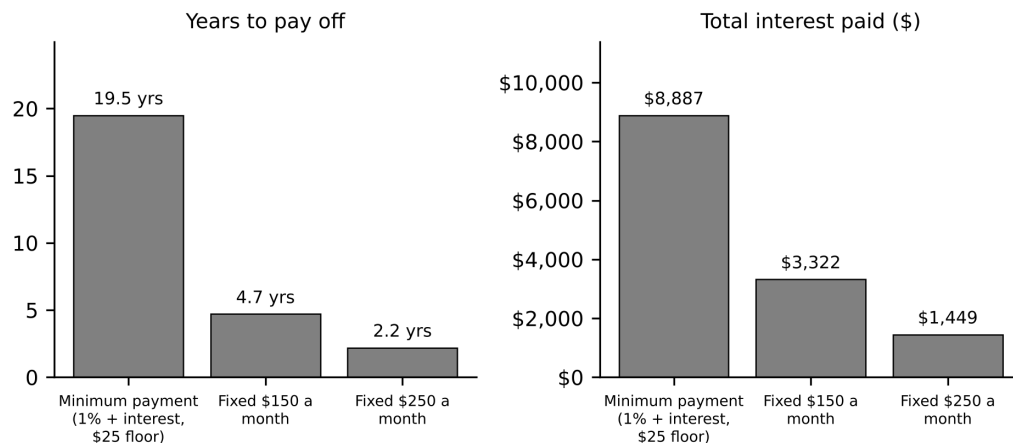
2010 **to now**. The Dodd-Frank Act created the **Consumer Financial Protection Bureau**, which opened in 2011 and enforces the card, payday, and overdraft rules in this case file. Rates climbed through the late 2010s and reached record highs in 2024; Congress has periodically debated a national rate cap and has not passed one.

Key Takeaways

- A **credit card** is a reusable unsecured loan. Pay the **statement balance** in full by the due date and the **grace period** makes it free; pay less and interest runs on the whole balance.
- $\text{APR} \div 365$ is the **daily periodic rate**, applied to the **average daily balance**. Unpaid interest **compounds** against the borrower, the mirror image of the Unit 11 savings case.
- The **minimum payment** (about 1 percent of balance plus interest, \$25 to \$35 floor) on \$5,000 at 24 percent takes 19.5 years and about \$8,900 of interest. A fixed \$150 takes 56 months and \$3,300; a fixed \$250 takes 26 months and \$1,450.
- Rates are high because cards are **unsecured**, **charge-offs** run 4 to 5 percent, and APRs float at **prime** plus a **margin**. US card balances are about \$1.2 trillion (**ny Fed**); 45 to 50 percent of cardholders are **revolvers**.
- **Payday loans** run 300 to 400 percent **APR**, **title loans** about 300 percent with the car as collateral, and BNPL is free only until a payment is missed.
- FDIC and NCUA insure \$250,000 per depositor per institution; decline **overdraft** coverage on debit purchases.
- The habits: pay in full, **autopay**, keep **utilization** under 30 percent, and pay off any balance before investing.
- Diners Club 1950, BankAmericard 1958, Marquette 1978 ended rate caps, the CARD Act 2009 added the warning box, the CFPB has policed the industry since 2011.

Look at the Data

Paying Off \$5,000 at 24% APR: Three Plans



Interest compounded monthly at 2 percent; minimum payment = 1 percent of balance + interest, \$25 floor.
 Source: Author computation; rate context from Federal Reserve G.19 (accounts assessed interest, about 22–23% in 2024–2025) and CFPB.

Paying off a \$5,000 credit card balance at 24 percent APR under three payment plans, computed with interest compounded monthly (2 percent per month). Minimum payment is 1 percent of the balance plus that month's interest, with a \$25 floor, the formula most large issuers use. Minimum: 234 months (19.5 years), \$8,887 interest. Fixed \$150: 56 months, \$3,322 interest. Fixed \$250: 26 months, \$1,449 interest. Rate context from the Federal Reserve G.19 (Consumer Credit) and the Consumer Financial Protection Bureau.

Using the chart, compute the total amount paid (balance plus interest) under each plan. Then explain, in two or three sentences, why a payment that falls each month produces so much more interest than a payment that stays fixed, even though both begin at \$150.

Investigate It

Run the Numbers on a Real Card. Optional; internet required. Record your findings on the Investigate It sheet from the free companion materials.

Part 1 — The Rate

Open the Federal Reserve's G.19 Consumer Credit release:

<https://www.federalreserve.gov/releases/g19/current/>

- 1) Find the 'Credit card plans' rows under commercial bank interest rates. Record the most recent rate for 'all accounts' and for 'accounts assessed interest.' Explain in one sentence why the second number is higher.
- 2) Record total revolving credit outstanding (in billions). Compare it to the \$1.2 trillion figure in the case.

Part 2 — The Payoff

Open a credit card payoff calculator:

<https://www.calculator.net/credit-card-payoff-calculator.html>

- 3) Enter a \$3,000 balance at the 'accounts assessed interest' rate from Part 1 with a \$90 monthly payment. Record the months to payoff and total interest. Then raise the payment to \$150 and record both again.

Part 3 — The Rules

Open the CFPB's credit card consumer tools:

<https://www.consumerfinance.gov/consumer-tools/credit-cards/>

- 4) Find the answer to one of these: how a grace period works, what happens if you pay only the minimum, or how a late payment affects your rate. Summarize the CFPB's answer in two sentences, then write two more sentences on which of your Part 2 results surprised you most and why.

Unit Assessment

The Case of the Credit Card That Charged 24 Percent

Circle the best answer for each multiple-choice question. Answer the written questions in complete sentences, using the case reading as your evidence. Questions that mention a diagram, graph, or curve refer to the figures printed in this case file at the start of the unit.

- 1.* A credit card's grace period is:
 - A. The time the bank has to investigate a disputed charge
 - B. The number of days a payment can be late without a fee
 - C. The first year of the account, when the rate is fixed
 - D. The time between the statement and the due date during which no interest is charged if the statement balance is paid in full
- 2.* A card with a 24 percent APR has a daily periodic rate of about:
 - A. 0.066 percent ($24 \div 365$)
 - B. 0.24 percent ($24 \div 100$)
 - C. 2 percent ($24 \div 12$)
 - D. 24 percent, charged once a year
- 3.* The most common minimum-payment formula on US credit cards is:
 - A. The full amount of that month's purchases
 - B. About 1 percent of the balance plus that month's interest, with a \$25 to \$35 floor
 - C. A flat \$50 regardless of balance
 - D. 10 percent of the balance
4. Why does paying only the minimum stretch a payoff over many years?
 - A. The payment shrinks as the balance shrinks, so very little principal is paid each month
 - B. The bank adds a penalty for each minimum payment
 - C. The interest rate rises every year
 - D. Minimum payments are applied to interest only, never principal
5. Compound interest on a credit card balance works against the borrower because:
 - A. The rate is recalculated daily using the prime rate
 - B. The card's rewards are deducted from payments
 - C. Interest is charged only on new purchases
 - D. Unpaid interest is added to the balance and then charged interest itself
6. Credit card rates are far higher than mortgage rates mainly because card debt is:
 - A. Insured by the FDIC
 - B. Unsecured, so the lender has nothing to repossess if the borrower defaults
 - C. Fixed for the life of the account
 - D. Taxed at a higher rate

7. A 'revolver' is a cardholder who:
- A. Has been late on a payment in the past year
 - B. Pays the statement balance in full every month
 - C. Holds several cards from different banks
 - D. Carries a balance from month to month and pays interest on it
8. The Credit CARD Act of 2009 requires every statement to include:
- A. A cap on the interest rate at 18 percent
 - B. A list of the cardholder's other debts
 - C. The cardholder's credit score
 - D. A warning box showing how long payoff takes at the minimum payment and what a 3-year payoff would cost
9. A payday loan charging \$15 per \$100 for two weeks carries an annual percentage rate of about:
- A. 30 percent
 - B. 60 percent
 - C. 390 percent
 - D. 15 percent
10. The single habit that makes a credit card's interest rate irrelevant is:
- A. Making the minimum payment on time
 - B. Paying the full statement balance by the due date every month
 - C. Keeping the balance under the credit limit
 - D. Choosing a card with rewards
11. Use the graph on the case file's Look at the Data page. According to the chart, how does the total interest paid under the minimum-payment plan compare with the fixed \$250 plan?
- A. The minimum plan costs about twice the interest and takes about twice as long
 - B. The two plans cost about the same interest, but the minimum plan takes longer
 - C. The \$250 plan costs more interest because the payments are larger
 - D. The minimum-payment plan costs about six times as much interest and takes about nine times as long
12. Explain how a \$5,000 balance at 24 percent can take nearly twenty years to pay off when the cardholder never misses a payment. Describe the minimum-payment formula, show the first month's arithmetic, and name what happens to the payment and the principal each month after that.

13. A state legislator proposes capping all credit card interest rates at 15 percent, arguing that 24 percent is 'legalized loan-sharking.' A bank economist replies that at 15 percent, banks would stop issuing cards to anyone with a credit score below about 700, and that many of those borrowers would turn to payday lenders at 400 percent. Write a **claim** about whether the rate cap would help or harm the borrowers it is meant to protect. Provide **evidence** from the case (why rates are high, charge-off rates, what the alternatives cost, the minimum-payment math). Give **reasoning** that connects the evidence to your claim, and name one group of borrowers for whom your answer would be different.

ANSWER KEY

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1. **D.** The grace period is the window (at least 21 days) between statement and due date; paying the statement balance in full means no interest on those purchases.
2. **A.** The daily periodic rate is the APR divided by 365: $24 \div 365 = 0.0658$ percent per day. The monthly equivalent, 2 percent, is used for the examples.
3. **B.** Most issuers charge 1 percent of the balance plus the month's interest and fees, with a \$25 to \$35 minimum; some use a flat 2 to 3 percent of the balance.
4. **A.** Because the payment is a percentage of a shrinking balance, both the payment and the principal portion fall every month, stretching the schedule to nearly 20 years.
5. **D.** Interest that is not paid joins the balance and is itself charged interest the next cycle, the mirror image of compound growth in a savings account.
6. **B.** Card debt is unsecured. With no collateral, lenders price in higher default risk (charge-offs of 4 to 4.5 percent a year) through higher rates.
7. **D.** Revolvers carry balances and pay interest; transactors pay in full. Roughly 45 to 50 percent of US cardholders are revolvers in a given year.
8. **D.** The minimum payment warning box shows the payoff time and cost at the minimum and the monthly payment for a 3-year payoff. The Act did not cap rates.
9. **C.** \$15 per \$100 over 14 days is 15 percent per period; 26 periods a year makes about 391 percent APR. Accept 390 to 400 percent.
10. **B.** Paying the statement balance in full keeps the grace period alive, so no interest is ever charged regardless of the APR.
11. **D.** The minimum plan pays about \$8,887 in interest over 234 months; the fixed \$250 plan pays about \$1,449 over 26 months. That is roughly six times the interest and nine times the duration, for a payment difference that starts at \$100 a month and grows as the minimum shrinks.
12. Strong answers: the minimum is about 1 percent of the balance plus that month's interest (floor \$25 to \$35). Month one: interest is 2 percent of \$5,000, \$100; minimum is \$50 plus \$100, \$150; only \$50 reduces the balance, to \$4,950. Each month after, the balance is slightly smaller, so interest, the required payment, and the principal portion all shrink; the payment falls toward the \$25 floor and the schedule stretches to about 234 months. Accept answers that use the monthly rate (2 percent) or the daily rate and that reach a payoff of roughly 19 to 20 years with interest exceeding \$5,000.
13. Strong claims take either side with evidence. For harm: rates are high because cards are unsecured and charge-offs run 4 to 4.5 percent; a 15 percent cap would make lending to higher-risk borrowers unprofitable, and the case shows the alternatives (payday at 300 to 400 percent, title loans at 300 percent with the car as collateral) are far worse, so a cap could push the riskiest borrowers down the ladder. For help: the minimum-payment math shows a \$5,000 balance costs \$8,887 at 24 percent; at 15 percent the same minimum schedule would cost thousands less, and the CFPB found issuers widened margins above prime to record levels, suggesting rates exceed what risk requires. Reasoning connects who gets credit at each rate to who bears the cost. Group for whom the answer differs: for prime borrowers (scores above about 700) a cap is nearly pure benefit because they would keep access at a lower rate; for subprime borrowers the risk of losing access entirely dominates. Accept well-argued answers in either direction that address both access and cost.