

## Unit Quiz Answer Key

Teen Money Independence

All 8 Units · Complete Grading Guidance

<b>8 Units</b> All Topics	<b>All 8 Quizzes</b> Every Answer Key	<b>3 Question Types</b> MC · Short Answer · Math	<b>Educator Use Only</b> Do not distribute to students
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## HOW TO USE THIS KEY

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This document provides complete answer guidance for all eight TMI unit quizzes. Each quiz is worth 30 points: 5 multiple choice questions at 2 points each (10 pts), 2 short answer questions at 5 points each (10 pts), and 1 math problem worth 10 points.

Multiple choice answers show the correct letter and a brief rationale explaining why the other options are incorrect. Short answer guidance describes what a strong response includes and specifies partial credit conditions. Math answers show the complete worked solution; accept answers within reasonable rounding unless otherwise noted.

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**UNIT 1 — MONEY FUNDAMENTALS**

Lessons 1.1 – 1.5 · 30 points total

**PART 1 — MULTIPLE CHOICE (2 POINTS EACH)**

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1. B — Money as a store of value means it holds purchasing power over time — savings retain value rather than having to be spent immediately. Medium of exchange (A) is a separate function; gold backing (D) has not applied since 1971.
2. C — The \$80 difference between gross (\$350) and net (\$270) is the amount withheld for taxes and deductions — FICA, federal withholding, and any other payroll deductions.
3. B — Joseph treated his \$317 net pay as if it were \$400 gross, spending freely before realizing he was short. The core error was failing to distinguish gross from net pay.
4. C — A high-yield savings account earns meaningfully more interest than a standard savings account and remains fully accessible for emergencies, unlike CDs or brokerage accounts.
5. C — FICA funds Social Security (6.2%) and Medicare (1.45%), totaling 7.65% for employees. Federal income tax is a separate withholding.

**PART 2 — SHORT ANSWER (5 POINTS EACH)**

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1. Opportunity cost is the value of the next-best alternative you give up when making a decision. Strong answers name two specific options, identify which was chosen, and clearly state what was foregone. Partial credit for a correct definition without a personal example.
2.  $\$6 \times 26$  biweekly paychecks = \$156/year in fees. She could eliminate this entirely by opening a free checking account at a bank or credit union — many have no minimum balance requirement.

**PART 3 — MATH (10 POINTS)**

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(a) Gross pay:  $\$13.50 \times 20 \text{ hrs} = \$270.00$  (b) Taxes withheld:  $\$270 \times 22\% = \$59.40$  (c) Net pay:  $\$270.00 - \$59.40 = \$210.60$  Accept answers within \$1 of rounding. Full credit requires showing all three steps.

**UNIT 2 — BUDGETING**

Lessons 2.1 – 2.5 · 30 points total

**PART 1 — MULTIPLE CHOICE (2 POINTS EACH)**

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1. C — A monthly phone bill is a fixed, recurring expense that falls under needs (50%). It is not discretionary spending and is not a savings vehicle.
2. B — A sinking fund is money set aside each month for a known future irregular expense — car registration, annual insurance, holiday gifts. It is not an emergency fund or an investment account.
3. C — About 59%:  $\$950 \div \$1,600 = 0.594$ . This significantly exceeds the 30% rule guideline, indicating a housing cost squeeze.
4. C — Grocery spending varies month to month based on choices made — it is the classic variable expense. Rent, insurance premiums, and fixed subscriptions are fixed.
5. B — Joseph's food spending is discretionary and variable. It exceeded its budget category — the definition of a variable expense problem.
6. B — When an envelope is empty the student must stop spending in that category or consciously transfer from another envelope and accept the trade-off. Borrowing from next month, moving money digitally, or opening a bank account are not part of the envelope method discipline.

**PART 2 — SHORT ANSWER (5 POINTS EACH)**

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1. Fixed expenses are the same amount every month regardless of behavior (rent, insurance, loan payments). Variable expenses change based on choices (groceries, gas, entertainment). Award full credit for one clear real-world example of each. Partial credit for correct definitions without examples.
2. Gross pay includes taxes not yet withheld. A budget built on gross pay will overestimate available money — leading to shortfalls when the actual (net) paycheck arrives. Strong answers name the specific deductions that create the gap.
3. The envelope method requires no bank, no card, no app, and no credit history — any teen with cash and envelopes has a complete functional budget system immediately. Strong answers name at least one specific limitation: cash does not build credit, earns no interest, is impractical for online purchases, and carries risk of loss or theft. Award partial credit for correct explanation of usefulness without identifying a limitation.

**PART 3 — MATH (10 POINTS)**

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(a) Needs (50%):  $\$1,800 \times 0.50 = \$900$  (b) Wants (30%):  $\$1,800 \times 0.30 = \$540$  (c) Savings (20%):  $\$1,800 \times 0.20 = \$360$  Remaining needs budget:  $\$900 - \$820$  (rent)  $- \$55$  (phone) =  $\$25$ /month for all other necessities. Award full credit for correct category totals plus the final subtraction. Accept rounding within \$1.

**UNIT 3 — SAVING & EMERGENCY FUNDS**

Lessons 3.1 – 3.4 · 30 points total

**PART 1 — MULTIPLE CHOICE (2 POINTS EACH)**

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1. C — The standard recommendation is 3 to 6 months of living expenses. One or two months is insufficient for most real emergencies; 12 months is excessive for most people.
2. B — High-yield savings accounts pay significantly more interest than standard accounts while maintaining the same accessibility and FDIC coverage.
3. B — Paying yourself first means automating savings on payday before any spending decisions are made. It removes the temptation and uncertainty of saving ‘what’s left.’
4. C — At 3% annual inflation,  $\$2,000 \times 0.03 = \$60$  in purchasing power lost in year one. Cash does not earn interest, and inflation silently erodes its real value.
5. C — An emergency fund exists for unexpected necessary expenses (job loss, medical bill, car repair) — not savings goals. Its purpose and access rules are distinct from regular savings.

**PART 2 — SHORT ANSWER (5 POINTS EACH)**

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1. Saving what’s left over means competing with every spending decision. ‘Paying yourself first’ automates the savings transfer on payday, before the money is mentally available to spend. Strong answers explain the behavioral advantage — removing willpower from the equation.
2. Joseph: no emergency fund means any unexpected cost requires debt or borrowing from others. Alex: a personal emergency could drain his business account, mixing personal and business finances dangerously. Sofia: \$800 in cash at home is uninsured (no FDIC), earns nothing, and is vulnerable to loss or theft. Award credit for identifying one specific risk per character with brief reasoning.

**PART 3 — MATH (10 POINTS)**

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(a) Emergency fund target:  $\$1,100 \times 4 \text{ months} = \$4,400$  (b) Months to goal:  $\$4,400 \div \$180/\text{month} = 24.4$  months (accept 24–25 months) Award full credit for correct target and division. Partial credit if only one step is correct.

**UNIT 4 — CREDIT & DEBT**  
Lessons 4.1 – 4.5 · 30 points total

**PART 1 — MULTIPLE CHOICE (2 POINTS EACH)**

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1. B — Payment history (on-time vs. late) is the single largest factor in a FICO score, accounting for approximately 35%. Number of accounts, account age, and self-checks (soft inquiries) are far less impactful.
2. C — Deferred interest promotions charge zero interest during the promotional period — but if any balance remains at the end, all the deferred interest (here, \$186) is charged retroactively in a single billing cycle.
3. C — A thin credit file means there is insufficient credit history for lenders to evaluate. It is not the same as a low score — it means no score or an unscorable file.
4. B — Paying the statement balance in full every month eliminates interest charges entirely and builds credit through consistent on-time payment history. This is the foundational rule for safe credit card use.
5. B — The total repaid exceeds the borrowed amount because interest compounds over the repayment period. On a 10-year, \$28,000 loan at 5.5%, total repayment is approximately \$36,500.

**PART 2 — SHORT ANSWER (5 POINTS EACH)**

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1. APR is the annual cost of borrowing as a percentage. The minimum payment is the smallest amount required to avoid a late fee — typically 1–2% of the balance or a flat minimum. Making only the minimum means most of the payment covers interest, reducing the principal by very little. Strong answers should quantify: on a \$1,200 balance at 24% APR, a \$30 minimum payment leaves the balance nearly unchanged after months of ‘paying.’
2. No debt is not the same as strong credit. Landlords run credit checks before approving leases. Lenders use credit scores to set mortgage and auto loan rates. Some employers check credit for financial-role hiring. Alex cannot qualify for competitive mortgage rates when he eventually buys a home. Sofia was already rejected for an apartment. Award credit for correct explanation plus at least one concrete real-world consequence.

**PART 3 — MATH (10 POINTS)**

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(a) Monthly interest:  $\$1,200 \times (24\% \div 12) = \$1,200 \times 2\% = \$24.00$  (b) Principal reduction:  $\$30.00 - \$24.00 = \$6.00$  Note: At this rate, it would take years to pay off this balance making only minimum payments. Full credit for correct monthly rate calculation and subtraction.

**UNIT 5 — TAXES**

Lessons 5.1 – 5.6 · 30 points total

**PART 1 — MULTIPLE CHOICE (2 POINTS EACH)**

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1. B — A progressive tax means higher marginal rates apply only to dollars above specific thresholds — not to all income. Each bracket rate applies only to the income that falls within it.
2. B — Self-employed workers pay the full 15.3% FICA because they act as both employee and employer. W-2 employees split this with their employer (7.65% each).
3. B — When Sofia's second employer set up withholding, it treated that job as her only income — withholding at a lower rate than her combined income required. The gap accumulated across the year.
4. B — A large refund means the government held too much of her money interest-free all year. Lucy's goal was accurate withholding — as close to \$0 owed/\$0 refunded as possible.
5. C — A tax credit reduces tax owed dollar-for-dollar. A \$1,000 credit saves exactly \$1,000. A \$1,000 deduction in the 22% bracket saves only \$220. Credits are always more valuable.

**PART 2 — SHORT ANSWER (5 POINTS EACH)**

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1. A deduction reduces taxable income; a credit reduces the tax bill directly. In the 22% bracket, a \$1,000 deduction saves \$220; a \$1,000 credit saves \$1,000 regardless of bracket. Credits are more valuable. Strong answers include a numerical comparison.
2. Failure-to-file penalty: 5% of tax owed per month, up to 25%. Failure-to-pay penalty: 0.5% per month on the unpaid balance. He should file immediately — even if he cannot pay. Filing stops the larger failure-to-file penalty from accumulating, and he can set up an IRS payment plan for the balance.

**PART 3 — MATH (10 POINTS)**

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(a) SE tax base:  $\$9,200 \times 92.35\% = \$8,476.20$  (b) SE tax:  $\$8,476.20 \times 15.3\% = \$1,296.86$  (accept \$1,295–\$1,302 range) (c) Federal income tax: \$0 — income after the SE deduction falls below the standard deduction. Total owed to IRS: approximately \$1,297 (SE tax only). Award full credit for correct 92.35% adjustment, correct multiplication, and correct federal income tax reasoning.

**UNIT 6 — INVESTING & WEALTH BUILDING**

Lessons 6.1 – 6.7 · 30 points total

**PART 1 — MULTIPLE CHOICE (2 POINTS EACH)**

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1. C — Rule of 72:  $72 \div 8 = 9$  years to double. This is an approximation; the precise answer is slightly over 9 years.
2. B — Lucy invested at 17; Joseph at 27. The same investment at the same return rate has 10 additional years of compounding for Lucy — producing a dramatically larger final value due to exponential growth.
3. B — Expense ratios are deducted from returns every year. Over 40 years, a 1.16% annual difference compounds into a substantial gap — keeping more return invested produces significantly more wealth.
4. B — Roth IRA eligibility requires earned income (wages or self-employment income) during the tax year. Age, prior IRA status, and savings balance are not the determining factors.
5. B — 300% returns in 90 days plus a ‘recruit friends’ requirement are hallmarks of a Ponzi or pyramid scheme. Legitimate investments do not promise guaranteed extraordinary returns.
6. C — Bitcoin dropped approximately 80% between November 2021 and November 2022.  $\$500 \times 0.20 = \$100$  remaining. A total market index fund during the same period dropped approximately 20%, leaving  $\$500 \times 0.80 = \$400$ . The difference is \$300.
7. B — An influencer promoting a specific coin with urgency language (“get in NOW”) and no financial basis is a classic pump-and-dump setup. Influencers promoting crypto are almost always paid to do so. Followers buy, drive the price up, the influencer sells at the peak, and latecomers lose money.

**PART 2 — SHORT ANSWER (5 POINTS EACH)**

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1. Time allows more compounding cycles — each cycle's gains become the base for the next cycle. Lucy's \$2,000 at 7% from age 17 to 65 = 48 years of compounding (~6.9 doublings, ending near \$64,000 from a single \$2,000 contribution). Starting 10 years later cuts roughly 1.4 doublings from the total. Strong answers include at least one specific comparison of outcomes at different start ages.
2. Inflation: at 3% annual inflation, \$4,800 loses approximately \$144 in purchasing power in year one — and more each following year. Opportunity cost: \$4,800 invested at 7% for 48 years would grow to approximately \$81,000 by age 65. The cash approach sacrifices both.
3. False — this is incorrect. The IRS treats cryptocurrency as property. Trading one crypto for another (Bitcoin → Ethereum) is disposing of one asset and acquiring another — this is a taxable event regardless of whether dollars are involved. If the Bitcoin increased in value since purchase, capital gains tax is owed on that gain. Strong answers explicitly state that crypto-to-crypto trades ARE taxable and explain why (property treatment by IRS).

**PART 3 — MATH (10 POINTS)**

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Rule of 72 at 7%:  $72 \div 7 \approx 10.3$  years per doubling. (a) First doubling at age:  $17 + 10.3 \approx$  age 27 (\$2,000 → \$4,000) (b) Second doubling at age:  $27 + 10.3 \approx$  age 37–38 (\$4,000 → \$8,000) (c) Value after two doublings: approximately \$8,000 Accept reasonable rounding. Award full credit for correct Rule of 72 application and three correct conclusions.

**UNIT 7 — HOUSING & INSURANCE**

Lessons 7.1 – 7.6 · 30 points total

**PART 1 — MULTIPLE CHOICE (2 POINTS EACH)**

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1. C — Joseph has no renters insurance. His building's policy covers the structure — not tenants' personal property. He recovers \$0. This is the exact scenario from the Unit 7 review.
2. B — A higher credit score qualifies for a lower mortgage interest rate. On a 30-year mortgage, even a 0.5% rate difference can mean \$20,000–\$40,000 more paid over the life of the loan.
3. C — Count back: July 31 minus 30 days = June 30; minus another 30 days = May 31; that is 61 days, so June 1 is the correct 60-day deadline.
4. B — PMI is required when the down payment is less than 20% of the purchase price — the lender's protection against higher default risk at low equity.
5. C — The \$800 bill is below the \$2,500 deductible. The patient pays the full \$800 out of pocket. Premiums are paid regardless and do not apply to individual bills until the deductible is satisfied.

**PART 2 — SHORT ANSWER (5 POINTS EACH)**

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1. 'Savings':  $\$18 \times 12 = \$216$ /year saved on premiums. Loss: \$2,200 in uninsured property. Net cost of skipping insurance:  $\$2,200 - \$216 = \$1,984$ . Months of premiums to equal one loss:  $\$2,200 \div \$18 \approx 122$  months (~10 years). Strong answers include both dollar calculations.
2. Premium: the monthly cost of maintaining coverage — paid whether or not you use the insurance (\$250/month in the example). Deductible: the amount you pay out of pocket before insurance begins covering most services (\$2,500 here, so the \$800 bill is paid entirely by the patient). Copay: a fixed payment for a specific service after the deductible is met (e.g., \$30 per doctor visit once you've paid your \$2,500 deductible for the year). Award full credit for all three terms correctly defined with an example.

**PART 3 — MATH (10 POINTS)**

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(a) Down payment:  $\$280,000 \times 10\% = \$28,000$  (b) Loan amount:  $\$280,000 - \$28,000 = \$252,000$  (c) Annual PMI:  $\$252,000 \times 0.85\% = \$2,142 \div 12 = \$178.50$ /month (d) PMI removal threshold (80% LTV):  $\$280,000 \times 80\% = \$224,000$  PMI can be requested for removal when the loan balance reaches \$224,000. Award full credit for all four parts correct. Partial credit for any three correct steps.

**UNIT 8 — COLLEGE, CAREER & INDEPENDENCE**

Lessons 8.1 – 8.6 · 30 points total

**PART 1 — MULTIPLE CHOICE (2 POINTS EACH)**

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1. C — Net price is what the student actually pays after all grants and scholarships are subtracted from the sticker price. It is the most meaningful number for comparing schools.
2. B —  $\$34,000$  (total cost) –  $\$28,000$  (total aid package) =  $\$6,000$  still needed. Note:  $\$18,000$  of the package is loans that must be repaid — but the question asks about the immediate funding gap.
3. B — Unsubsidized loans accrue interest from disbursement. During 4 years of school with no payments, interest accumulates and is then capitalized (added to the principal balance) at repayment start.
4. C —  $\$46,000$  salary + ( $\$46,000 \times 4\% = \$1,840$  match) +  $\$7,200$  health insurance =  $\$55,040$  total compensation. Accept  $\$54,040$ – $\$55,040$  — award credit for any answer that correctly adds all three components.
5. C — Countering at  $\$59,000$ – $\$61,000$  is anchored in market data ( $\$57,000$ – $\$64,000$  range) and is a specific, reasonable ask. Accepting immediately leaves money on the table; an  $\$80,000$  counter is not credible.

**PART 2 — SHORT ANSWER (5 POINTS EACH)**

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1. Salary-matching rule: borrow no more than your expected first-year salary. For a  $\$58,000$  nursing career: maximum recommended borrowing =  $\$58,000$ . Plan cost:  $\$24,000 \times 4$  years =  $\$96,000$  — well above the guideline. This plan does not fit. Strong answers identify the gap and suggest alternatives: grants, scholarships, community college for first two years, or a less expensive school.
2. Starting salary becomes the baseline for all future percentage-based raises. A 3% raise on  $\$52,000 = \$1,560$  extra per year. A 3% raise on  $\$59,000 = \$1,770$  extra per year — a  $\$210$ /year gap that grows with every subsequent raise. Over a 40-year career, the compounding effect of a higher starting salary is substantial. Strong answers use specific numbers to show the compounding effect.

**PART 3 — MATH (10 POINTS)**

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- (a) Interest accrued (simple interest):  $\$5,500 \times 6.5\% \times 4$  years =  $\$1,430$  (b) Capitalized balance at repayment:  $\$5,500 + \$1,430 = \$6,930$  (c) Principal reduction in month 1:  $\$62.00$  payment –  $\$30.00$  interest =  $\$32.00$   
Award full credit for all three parts. Partial credit for any two correct steps.