



REAL ESTATE RESOURCES ACADEMY

REAL ESTATE MATH CHEAT SHEET, PRACTICE QUESTIONS & ANSWER KEY

Transfer & Intangible Tax • DTI Ratios • Prorations • Commission • Acres & Miles • GRM & GIM • Cap Rate/NOI • Mills • PMI • Measurements

VERIFIED FORMULAS

Every formula and all 100 answers are independently calculated and checked before publication.

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PART I — MATH CHEAT SHEET

Formulas, quick notes, and worked-example logic for every topic tested below.

1. Transfer Tax (Georgia)

Tax = (Price ÷ 100) × \$0.10 (equivalently, Price × 0.001, or Price ÷ 1,000)

Georgia's exact statutory rule is \$1.00 for the first \$1,000 plus \$0.10 for each additional \$100 of price. Algebraically, those two pieces collapse into one clean formula — $\text{Price} \div 100 \times \0.10 — which matches the statute exactly for any price that's a multiple of \$100 (i.e., virtually every real transaction). Typically paid by the seller at closing.

2. Intangible Recording Tax (Georgia)

Tax = Loan Amount × \$1.50 per \$500 (i.e., Loan × 0.003)

Capped at \$25,000 per note

Applies to long-term security deeds recorded in Georgia. Paid by the borrower, collected by the lender at closing.

3. Front-End / Back-End (DTI) Ratios

Front-End Ratio = Housing Payment (PITI) ÷ Gross Monthly Income

Back-End Ratio = Total Monthly Debt Payments ÷ Gross Monthly Income

Common qualifying guidelines used in exam math are 28% front-end and 36% back-end, though actual limits vary by loan program and lender.

4. Prorations

Daily Rate = Annual (or Monthly) Charge ÷ Days in that Period

Party's Share = Daily Rate × Number of Days Owned/Owed

Property taxes are commonly prorated using a 365-day year; some closing costs (like HOA dues or rent) are prorated using a 30-day month / 360-day year convention. Always confirm which convention a problem is using.

5. Commission

Commission = Sale Price × Commission Rate

Sale Price = Commission ÷ Rate

Rate = Commission ÷ Sale Price

When commission is split between firms or between a broker and agent, calculate the total commission first, then apply each split percentage in sequence.

6. Acres

1 Acre = 43,560 Square Feet

Acres = Total Square Feet ÷ 43,560

For a rectangular parcel, first find square feet (Length × Width), then convert to acres.

7. Miles & the Section System

1 Mile = 5,280 Feet

1 Section = 1 Square Mile = 640 Acres

A quarter section = 160 acres; a quarter of a quarter section = 40 acres. These round numbers are a fast way to check your work on section-based land problems.

8. GRM (Gross Rent Multiplier)

$$\text{GRM} = \text{Sale Price} \div \text{Monthly Gross Rent}$$

$$\text{Estimated Value} = \text{GRM} \times \text{Monthly Gross Rent}$$

Uses **monthly** rent. Typically derived from a comparable property, then applied to the subject property's monthly rent.

9. GIM (Gross Income Multiplier)

$$\text{GIM} = \text{Sale Price} \div \text{Annual Gross Income}$$

$$\text{Estimated Value} = \text{GIM} \times \text{Annual Gross Income}$$

The annual-income counterpart to GRM — same logic, but built from yearly income instead of monthly rent.

10. Capitalization Rate & NOI

$$\text{NOI} = \text{Gross Operating Income} - \text{Operating Expenses}$$

$$\text{Value} = \text{NOI} \div \text{Cap Rate}$$

$$\text{Cap Rate} = \text{NOI} \div \text{Value}$$

NOI is calculated before debt service (loan payments), income taxes, and depreciation.

11. Mills (Property Tax Rate)

$$1 \text{ Mill} = \$1 \text{ per } \$1,000 \text{ of Assessed Value} = 0.001$$

$$\text{Property Tax} = \text{Assessed Value} \times (\text{Mill Rate} \div 1,000)$$

A 25-mill rate equals a 2.5% tax rate. Convert mills to a decimal before multiplying by assessed value.

12. PMI (Private Mortgage Insurance)

$$\text{Annual PMI} = \text{Loan Amount} \times \text{Annual PMI Rate}$$

$$\text{Monthly PMI} = \text{Annual PMI} \div 12$$

Generally required on conventional loans when the down payment is below 20% (LTV above 80%); protects the lender, not the borrower.

13. Measurements (Square Feet, Cubic Feet & Yards)

$$\text{Area (square feet)} = \text{Length} \times \text{Width}$$

$$\text{Perimeter} = 2 \times (\text{Length} + \text{Width})$$

$$\text{Volume (cubic feet)} = \text{Length} \times \text{Width} \times \text{Height}$$

$$1 \text{ Square Yard} = 9 \text{ Square Feet}$$

Always match your units before multiplying — convert feet to yards (or vice versa) first if a problem mixes them. Volume problems (excavation, concrete, storage) are measured in cubic feet or cubic yards; 1 cubic yard = 27 cubic feet.

PART II — 100 PRACTICE QUESTIONS

Every question is an original, scenario-based word problem with a full 3-paragraph setup. Work each problem by hand before checking your answer against the separate Answer Sheet.

1. A young couple in Savannah has just gone under contract to purchase their first home, a three-bedroom bungalow near Forsyth Park, for a negotiated price of \$150,000. Their closing attorney has explained that Georgia imposes a real estate transfer tax on the deed at closing, separate from any loan-related costs, and that this tax is calculated directly from the sale price under state law.

The purchase agreement is silent on who will pay the transfer tax, so under Georgia's default rule the responsibility falls to the seller, who executes the deed. The attorney's office is preparing the closing disclosure and needs to list the exact dollar amount of transfer tax due so it can be charged correctly on the settlement statement.

Using Georgia's transfer tax rate of \$1.00 for the first \$1,000 of the sale price plus \$0.10 for each additional \$100, how much transfer tax is owed on this \$150,000 sale?

- A. \$150.00
- B. \$15.00
- C. \$1,500.00
- D. \$300.00

2. In Marietta, a retired couple is downsizing from their longtime family home into a smaller condo closer to their grandchildren. After several months on the market and two rounds of negotiation, they've accepted an offer of \$220,000 from a young professional relocating for a new job at a nearby hospital.

Their listing agent reminds them during the pre-closing walkthrough that, as sellers, they will be responsible for Georgia's real estate transfer tax at closing, which their attorney will calculate directly from the final negotiated sale price and collect through the settlement statement along with their other seller-side costs.

Applying Georgia's transfer tax formula of \$1.00 per \$1,000 (plus \$0.10 per additional \$100 for amounts beyond a round thousand), what transfer tax will the sellers owe on the \$220,000 sale?

- A. \$22.00
- B. \$2,200.00
- C. \$440.00
- D. \$220.00

3. A commercial investor based in Augusta has agreed to purchase a small strip of retail units near a growing suburban intersection for \$275,000, planning to lease the spaces to a mix of local small businesses. The seller is an out-of-state LLC that has owned the property for over a decade and is exiting the Georgia market entirely.

Because the seller's attorney is unfamiliar with Georgia's specific transfer tax rules, the buyer's local title company has taken the lead on calculating the tax due at closing, walking both parties through how the state's per-thousand-dollar rate applies to a commercial transaction just as it would to a residential one.

Based on Georgia's transfer tax rate of \$1.00 for the first \$1,000 plus \$0.10 for each additional \$100 of the sale price, how much transfer tax is due on this \$275,000 commercial sale?

- A. \$27.50
- B. \$275.00
- C. \$2,750.00
- D. \$550.00

4. A growing family in Alpharetta has outgrown their current townhome and is purchasing a larger single-family house in a neighborhood with better school zoning, agreeing to a sale price of \$310,000 after a competitive multiple-offer situation. The sellers, an older couple whose children have long since moved out, are relocating to a retirement community.

During final closing preparations, the escrow officer flags that the settlement statement must reflect Georgia's real estate transfer tax as a seller-side charge, since nothing in the purchase agreement shifted that customary obligation to the buyer, and the amount must be calculated precisely from the \$310,000 contract price.

Using Georgia's transfer tax formula of \$1.00 for the first \$1,000 plus \$0.10 for each additional \$100 of sale price, what is the transfer tax owed on this \$310,000 transaction?

- A. \$31.00
- B. \$620.00
- C. \$3,100.00
- D. \$310.00

5. A physician relocating to Athens for a new position at the regional medical center has agreed to purchase a custom-built home on a wooded lot for \$425,000. The sellers built the home themselves fifteen years earlier and are the only owners the property has ever had, so the transaction includes an unusually detailed set of seller disclosures.

The buyer's lender has requested a preliminary closing disclosure early in the process so the physician can budget accurately, and the title company preparing that disclosure needs to show the exact Georgia transfer tax that will be charged to the sellers based on the \$425,000 contract price.

Applying Georgia's transfer tax rate of \$1.00 per \$1,000 of sale price (plus \$0.10 per additional \$100), what amount of transfer tax will appear on the closing disclosure for this \$425,000 sale?

- A. \$4,250.00
- B. \$42.50
- C. \$425.00
- D. \$850.00

6. A local developer in Columbus has sold off the last remaining lot in a small residential subdivision to a custom home builder for \$500,000, wrapping up a project that took nearly four years to fully build out and sell. The builder plans to construct a spec home on the lot and resell it within the next twelve months.

Because this is the final lot in the subdivision, the developer's accountant is closing out the project's books and wants an exact accounting of every closing cost tied to the sale, including the Georgia transfer tax that will reduce the developer's net proceeds from the \$500,000 sale price.

Using Georgia's transfer tax formula of \$1.00 for the first \$1,000 plus \$0.10 for each additional \$100 of sale price, how much transfer tax will the developer owe on this \$500,000 lot sale?

- A. \$50.00
- B. \$1,000.00
- C. \$5,000.00
- D. \$500.00

7. An Atlanta-based investment group has purchased a small multifamily building near the Beltline for \$640,000, intending to renovate the units and convert the property to higher-end long-term rentals. The seller is a longtime local landlord who has decided to retire from active property management entirely.

The transaction is complex enough that both parties' attorneys are cross-checking every line of the settlement statement, and one item under review is the Georgia real estate transfer tax, which must be calculated from the full \$640,000 contract price regardless of how the property will be used going forward.

Based on Georgia's transfer tax rate of \$1.00 for the first \$1,000 plus \$0.10 for each additional \$100 of sale price, what transfer tax is due on this \$640,000 sale?

- A. \$64.00
- B. \$640.00
- C. \$1,280.00
- D. \$6,400.00

8. A first-time homebuyer in Macon is finalizing a mortgage to purchase a starter home, borrowing \$100,000 from a local credit union after making a modest down payment from savings she has built up over several years working as a nurse. Her loan officer has walked her through the monthly payment breakdown but hasn't yet covered the one-time taxes due at closing.

Because her loan is a long-term note secured by a security deed recorded in Georgia, the closing attorney explains that a separate intangible recording tax applies to the loan amount itself, distinct from the transfer tax on the sale price, and that this tax will appear as a borrower-side charge on her closing disclosure.

Using Georgia's intangible recording tax rate of \$1.50 per \$500 of the loan amount, how much intangible tax will be due on her \$100,000 loan?

- A. \$300.00
- B. \$150.00
- C. \$1,500.00
- D. \$600.00

9. A young couple in Warner Robins is refinancing their existing mortgage to take advantage of lower interest rates, rolling their remaining balance and some closing costs into a new long-term loan of \$150,000 with a regional bank. Neither of them has been through a refinance before, so their loan officer is walking them through every line item in detail.

The bank's closing team explains that because this new loan will be secured by a freshly recorded security deed in Georgia, the couple will owe the state's intangible recording tax on the full \$150,000 loan amount, separate from and in addition to any lender fees or title insurance premiums.

Applying Georgia's intangible tax rate of \$1.50 per \$500 of loan amount, how much intangible tax is owed on this \$150,000 refinance?

- A. \$225.00
- B. \$450.00
- C. \$900.00
- D. \$150.00

10. A growing family in Roswell is purchasing a larger home to accommodate their three children and has been approved for a conventional loan of \$200,000 through a national mortgage lender. Their real estate agent recommended a closing attorney who specializes in walking first-time move-up buyers through the finer details of a Georgia closing.

As part of the closing disclosure review, the attorney points out that the \$200,000 loan will trigger Georgia's intangible recording tax at the time the security deed is recorded, and that this amount is typically collected from the borrower even though the lender is technically the party who remits it to the county.

Using the rate of \$1.50 per \$500 of loan amount, what intangible recording tax will be due on this \$200,000 loan?

- A. \$1,000.00
- B. \$600.00
- C. \$300.00
- D. \$1,200.00

11. A self-employed contractor in Newnan is purchasing a home with a mix of cash savings and a \$250,000 mortgage from a lender who specializes in loans for self-employed borrowers, given the additional documentation his non-traditional income required during underwriting. The loan process took longer than a typical W-2 borrower's, but he finally has a firm closing date.

With closing just days away, the title company preparing the settlement statement confirms that the \$250,000 loan amount will be subject to Georgia's intangible recording tax when the security deed is recorded, and that this cost needs to be included in the final cash-to-close figure the contractor was given earlier in the process.

Based on Georgia's intangible tax rate of \$1.50 per \$500 of loan amount, how much intangible tax will be due on this \$250,000 loan?

- A. \$750.00
- B. \$375.00
- C. \$500.00
- D. \$1,500.00

12. A dual-income couple in Duluth, both employed at nearby corporate offices, is purchasing a new construction home directly from a builder, financing the purchase with a \$300,000 loan through the builder's preferred lender. The builder's in-house closing coordinator handles most of the paperwork, since new-construction closings often follow a fairly standardized process.

Even though the loan is coming through the builder's preferred lender, the intangible recording tax still applies exactly as it would with any other Georgia lender, calculated directly from the \$300,000 loan amount and collected as part of the standard closing costs on the settlement statement.

Using the rate of \$1.50 per \$500 of loan amount, what is the intangible recording tax owed on this \$300,000 new-construction loan?

- A. \$900.00
- B. \$600.00
- C. \$1,800.00
- D. \$450.00

13. A retired airline pilot in Peachtree City is purchasing a home in a golf-cart-friendly community, financing part of the purchase with a \$350,000 loan even though he could have paid cash, preferring to keep more of his retirement savings invested rather than tied up in home equity.

His financial advisor reminded him that taking out a mortgage in Georgia, even a larger one used primarily for financial flexibility rather than necessity, still triggers the same intangible recording tax rules as any other long-term note secured by real estate in the state.

Applying Georgia's intangible tax rate of \$1.50 per \$500 of loan amount, how much intangible tax will be due on this \$350,000 loan?

- A. \$700.00
- B. \$1,050.00
- C. \$875.00
- D. \$1,750.00

14. A large regional developer is securing construction financing for a new mixed-use project outside Savannah, recording a security deed against a long-term note with a face amount of \$10,000,000 to fund the first phase of construction. The lender's closing team has handled large commercial loans across several states and knows Georgia's rules differ from most.

Unlike smaller residential loans, a note this large would generate an intangible tax far beyond what most borrowers ever pay, which is exactly why Georgia law caps the intangible recording tax at a fixed maximum amount per note, regardless of how large the underlying loan actually is.

Given a \$10,000,000 note and Georgia's intangible tax rate of \$1.50 per \$500 (which would otherwise produce a much larger figure), what intangible tax is actually owed once the statutory cap is applied?

- A. \$30,000.00
- B. \$25,000.00
- C. \$15,000.00
- D. \$50,000.00

15. A loan officer in Kennesaw is prequalifying a young teacher for her first mortgage. The teacher earns a gross monthly income of \$6,000 from her salary and has no other significant income sources, having just finished paying off her student loans earlier in the year.

Her proposed monthly housing payment, including principal, interest, taxes, and insurance (PITI), would come to \$1,500 under the loan program she's applying for. The loan officer needs to calculate her front-end ratio to see whether it falls within the program's typical guideline of 28%.

Using the front-end ratio formula of $\text{Housing Payment} \div \text{Gross Monthly Income}$, what is this borrower's front-end ratio, expressed as a percentage?

- A. 28%
- B. 22%
- C. 30%
- D. 25%

16. A married couple in Rome, Georgia is applying for a joint mortgage, combining both of their incomes on the loan application. Together, their gross monthly income totals \$5,000, drawn from one spouse's full-time salary and the other's part-time consulting work.

Their proposed monthly housing payment on the home they've selected would be \$1,600, which their loan officer notes is on the higher side relative to their combined income and will need careful review against the lender's front-end guideline before final approval.

Using the front-end ratio formula of $\text{Housing Payment} \div \text{Gross Monthly Income}$, what is this couple's front-end ratio?

- A. 30%
- B. 28%
- C. 32%
- D. 35%

17. An underwriter reviewing a loan file in Valdosta is calculating a borrower's back-end ratio, which accounts for all of the borrower's recurring monthly debt obligations, not just the proposed housing payment. The borrower's gross monthly income is \$8,000, drawn from a stable salaried position he has held for over six years.

Between the proposed housing payment, an auto loan, and two credit cards with minimum monthly payments, the borrower's total monthly debt obligations add up to \$2,880. The underwriter needs this figure expressed as a ratio to compare against the lender's back-end guideline of 36%.

Using the back-end ratio formula of $\text{Total Monthly Debt Payments} \div \text{Gross Monthly Income}$, what is this borrower's back-end ratio?

- A. 32%
- B. 40%
- C. 38%
- D. 36%

18. A self-employed graphic designer in Statesboro is applying for a mortgage with a gross monthly income of \$4,500, calculated as a two-year average of her tax returns per standard self-employment underwriting guidelines. Her proposed housing payment is \$1,200 per month.

In addition to the housing payment, she also carries a \$450 monthly car payment on a vehicle she financed two years ago, which the underwriter must include when calculating her overall debt burden relative to her income, rather than looking at the housing payment alone.

Using the back-end ratio formula of Total Monthly Debt Payments ÷ Gross Monthly Income, what is this borrower's back-end ratio, rounded to the nearest whole percent?

- A. 27%
- B. 33%
- C. 37%
- D. 40%

19. A lender in Gainesville is prequalifying a prospective borrower whose gross monthly income is \$7,000. Before quoting the borrower a maximum purchase price, the loan officer wants to work backward from the lender's front-end guideline to figure out the maximum monthly housing payment the borrower could qualify for.

The lender's guideline for this particular loan program caps the front-end ratio at 28% of gross monthly income, meaning the loan officer needs to calculate 28% of the borrower's \$7,000 monthly income to arrive at the maximum allowable housing payment before running any further numbers.

Using a 28% front-end guideline, what is the maximum monthly housing payment this borrower could qualify for based on \$7,000 in gross monthly income?

- A. \$1,960
- B. \$2,100
- C. \$1,800
- D. \$2,240

20. A credit union in Dalton is evaluating a loan application from a borrower whose gross monthly income is \$5,500. Before calculating an exact housing payment, the underwriter first wants to establish the maximum total monthly debt this borrower could carry under the credit union's back-end guideline.

The credit union applies a standard back-end guideline of 36% for this loan product, which means all of the borrower's recurring debts combined, including the new housing payment, credit cards, and any auto or student loans, cannot exceed that percentage of gross monthly income.

Using a 36% back-end guideline, what is the maximum total monthly debt payment this borrower could carry based on \$5,500 in gross monthly income?

- A. \$1,800
- B. \$2,200
- C. \$1,650
- D. \$1,980

21. A loan processor in Cartersville is finalizing a file for a borrower with a gross monthly income of \$6,500. The proposed housing payment is \$1,800 per month, and the borrower also carries a \$400 monthly payment on a personal loan he took out the previous year to consolidate some smaller debts.

The processor needs to calculate the back-end ratio to confirm the file is ready to move to underwriting, since the back-end ratio accounts for every recurring monthly obligation the borrower has, not just the new mortgage payment being requested.

Using the back-end ratio formula of Total Monthly Debt Payments ÷ Gross Monthly Income, what is this borrower's back-end ratio, rounded to the nearest whole percent?

- A. 28%
- B. 31%
- C. 36%
- D. 34%

22. A private lender in Brunswick specializing in jumbo loans is prequalifying a high-earning borrower whose gross monthly income is \$9,000. The lender's front-end guideline for this particular jumbo loan product is more conservative than a typical conforming loan, set at 25% rather than the more common 28%.

Before quoting the borrower a maximum home price, the loan officer needs to calculate the maximum monthly housing payment allowed under this stricter 25% front-end guideline, since jumbo lenders often apply tighter ratios to offset the larger loan amounts typically involved.

Using a 25% front-end guideline, what is the maximum monthly housing payment this borrower could qualify for based on \$9,000 in gross monthly income?

- A. \$2,500
- B. \$2,250
- C. \$2,160
- D. \$2,025

23. A home sale in Griffin is closing on May 1st, and the annual property tax bill of \$3,650 for the full calendar year has already been paid in full by the seller back in January, well before the home ever went on the market. Since the seller paid the entire year's taxes upfront, the buyer now owes the seller a credit for the portion of the year the buyer will actually own the home.

The closing attorney is using a 365-day calendar year to prorate the taxes, counting the day of closing as the buyer's, which means the buyer is responsible for reimbursing the seller for the remaining 120 days of the year from May 1st through December 31st.

Using a 365-day proration method, what amount does the buyer owe the seller as a tax proration for the remaining 120 days of the year, given an annual tax bill of \$3,650?

- A. \$1,200.00
- B. \$1,000.00
- C. \$900.00
- D. \$1,095.00

24. A closing in Tifton is scheduled with an annual property tax bill of \$2,920 already paid in full by the seller for the current calendar year. The buyer will take ownership partway through the year, and the parties' contract calls for a standard 365-day proration to divide responsibility for the tax bill fairly between them.

Based on the closing date, the buyer will own the property for the final 200 days of the calendar year, meaning the seller is entitled to a credit for the days they will no longer own the home, and the buyer owes a reimbursement for those same 200 days.

Using a 365-day proration method, how much does the buyer owe the seller for 200 days of ownership, given an annual tax bill of \$2,920?

- A. \$1,460.00
- B. \$1,600.00
- C. \$1,750.00
- D. \$1,825.00

25. A quick closing in Milledgeville is wrapping up just 90 days into the calendar year, with the seller having prepaid the full annual property tax bill of \$4,380 back in January before listing the home. Because the sale is closing so early in the year, the seller is owed a substantial credit for the many months of ownership the buyer is about to take over.

The title company handling the closing is using the standard 365-day proration method, counting the day of closing as belonging to the buyer, which puts the buyer's responsibility at 90 days out of the full 365-day year covered by the prepaid tax bill.

Using a 365-day proration method, what amount does the buyer owe the seller for 90 days of ownership, given an annual tax bill of \$4,380?

- A. \$1,200.00
- B. \$900.00
- C. \$1,095.00
- D. \$1,080.00

26. A closing in Thomasville involves an annual property tax bill of \$1,825 that the seller paid in full at the start of the year. The buyer will take ownership for the final 250 days of the calendar year, a fairly typical mid-year closing that requires the standard 365-day proration method to divide the tax burden fairly.

The escrow officer preparing the settlement statement double-checks the day count carefully, since even a single day of error in a proration calculation can create a mismatch that delays closing while both sides' attorneys try to reconcile the numbers.

Using a 365-day proration method, how much does the buyer owe the seller for 250 days of ownership, given an annual tax bill of \$1,825?

- A. \$1,150.00
- B. \$1,250.00
- C. \$1,350.00
- D. \$1,000.00

27. A very late-year closing in Dublin, Georgia is happening with just 45 days left in the calendar year, on a property with an annual tax bill of \$7,300 that the seller already paid in full months earlier. Because so little of the year remains, the buyer's proration obligation to the seller will be relatively small compared to an earlier closing on the same property.

Despite the small dollar amount involved, the closing attorney calculates the proration with the same precision as any other file, applying the standard 365-day method to the remaining 45 days of buyer ownership for the year.

Using a 365-day proration method, what amount does the buyer owe the seller for the final 45 days of the year, given an annual tax bill of \$7,300?

- A. \$1,000.00
- B. \$730.00
- C. \$850.00
- D. \$900.00

28. A condo closing in Sandy Springs involves monthly HOA dues of \$300, and the parties' contract calls for the dues to be prorated using a 30-day month convention rather than the actual number of days in the closing month. The closing is scheduled for the 10th of the month.

Under this arrangement, the seller is responsible for the dues covering the first 9 days of the month, up through the day before closing, while the buyer becomes responsible starting on closing day itself, giving the buyer responsibility for the remaining 21 days under the 30-day convention.

Using a 30-day month proration method on \$300 in monthly HOA dues, how much of that amount is the buyer's responsibility for the 21 days beginning on the closing date?

- A. \$210.00
- B. \$180.00
- C. \$200.00
- D. \$190.00

29. A tenant-occupied duplex in College Park is being sold with the existing tenant's monthly rent of \$1,500 already collected in full by the seller at the start of the month, before the closing date was finalized. Because the seller collected rent for the entire month but is selling partway through it, the buyer is owed a credit for the days remaining in the month after closing.

Using a standard 30-day month convention, the closing falls with 10 days remaining in the month, meaning the seller needs to credit the buyer for that final 10-day stretch since the buyer, not the seller, will be the landlord entitled to that portion of the rent once ownership transfers.

Using a 30-day month proration method on \$1,500 in monthly rent, how much credit is the buyer owed for the final 10 days of the month?

- A. \$450.00
- B. \$550.00
- C. \$500.00
- D. \$400.00

30. An annual HOA assessment of \$3,600 in a large planned community near Woodstock is being prorated at closing using a 360-day year convention rather than the 365-day method sometimes used for property taxes, since the HOA's governing documents specifically call for the 12-month, 30-day-per-month convention.

The buyer in this transaction will own the property for the final 200 days of the HOA's assessment year under this 360-day convention, and the closing attorney needs to calculate exactly how much of the \$3,600 annual assessment the buyer owes the seller as reimbursement.

Using a 360-day year proration method, how much does the buyer owe the seller for 200 days of the year, given an annual HOA assessment of \$3,600?

- A. \$2,000.00
- B. \$1,800.00
- C. \$1,900.00
- D. \$2,100.00

31. A rental property in Snellville is changing hands mid-month, with the outgoing landlord having already collected the full month's rent of \$2,400 from the tenant before the sale closed. The new owner will be entitled to rent for the final 15 days of the month under the terms the parties negotiated at closing.

Both parties' agents agreed to use a standard 30-day month convention for this proration rather than counting the exact number of days in the actual calendar month, which simplifies the math and is common practice for rent prorations in residential transactions.

Using a 30-day month proration method on \$2,400 in monthly rent, how much credit is the buyer owed for the final 15 days of the month?

- A. \$1,000.00
- B. \$1,200.00
- C. \$1,100.00
- D. \$1,300.00

32. A listing agent in Lawrenceville has just closed on a home that sold for \$350,000 after a smooth 45-day marketing period with only minor negotiation on price. The listing agreement specified a straightforward total commission rate of 6%, with no unusual splits or referral arrangements complicating the payout.

Because both the buyer and seller were represented by agents from the same brokerage in this particular deal, the broker handling the file wants a clean calculation of the total commission generated by the sale before working out how that amount will be divided between the two sides.

Using a 6% commission rate on a \$350,000 sale price, what is the total commission generated by this transaction?

- A. \$35,000
- B. \$17,500
- C. \$21,000
- D. \$24,500

33. A brokerage in Buford has just closed on a home listed at a negotiated commission rate of 5.5%, which sold for \$480,000 after the sellers accepted a strong offer during the property's first open house weekend. The listing broker's office wants a clean total commission figure before splitting proceeds between the listing and selling sides.

Because the rate in this listing agreement is a less common 5.5% rather than the more typical 6%, the transaction coordinator preparing the commission disbursement wants to be especially careful about the decimal conversion before running the calculation.

Using a 5.5% commission rate on a \$480,000 sale price, what is the total commission generated by this transaction?

- A. \$24,000
- B. \$26,400
- C. \$28,800
- D. \$21,600

34. A cooperating brokerage in Decatur represented the buyer's side of a transaction and is entitled to exactly half of a \$21,000 total commission generated by the sale, per the standard 50/50 split arrangement outlined in the MLS listing at the time the buyer's agent first showed the property.

The buyer's broker is finalizing the commission disbursement to the individual agent who worked the deal from start to finish, and before applying the agent's personal split with the brokerage, needs to confirm exactly how much of the \$21,000 total commission belongs to the buyer's side.

If the total commission on this transaction is \$21,000 and the buyer's side is entitled to exactly half under the 50/50 split, how much commission does the buyer's brokerage receive?

- A. \$10,500
- B. \$7,000
- C. \$14,000
- D. \$12,600

35. A home in Smyrna sold for \$600,000 under a listing agreement with a total commission rate of 6%, but unlike a simple 50/50 split, this particular deal calls for the listing side to receive 55% of the total commission and the buyer's side to receive the remaining 45%, per the terms negotiated when the listing was first taken.

The listing broker's bookkeeper is working through the disbursement calculations step by step, first finding the total commission from the sale price and rate, and then applying the 55% listing-side split to determine exactly how much the listing brokerage will collect before any further internal splits with the individual agent.

Given a \$600,000 sale price, a 6% total commission rate, and a 55% listing-side split, how much commission does the listing brokerage receive?

- A. \$18,000
- B. \$21,600
- C. \$16,200
- D. \$19,800

36. Continuing from the same \$600,000 Smyrna sale with a \$36,000 total commission split 55/45 between listing and buyer's sides, the buyer's brokerage now needs to calculate its own share before passing along the individual buyer's agent's cut under her personal agreement with the brokerage.

The buyer's agent negotiated an aggressive 70/30 split in her favor when she joined the brokerage two years ago, meaning she personally keeps 70% of whatever commission dollars flow to the buyer's side of the transaction, with the remaining 30% going to the brokerage itself.

If the buyer's side receives 45% of the \$36,000 total commission, and the individual buyer's agent keeps 70% of that amount under her personal split, how much does the agent personally receive from this transaction?

- A. \$16,200
- B. \$11,340
- C. \$12,600
- D. \$10,800

37. A broker in Canton is reviewing a closed file where the total commission earned was \$18,000 on a home that sold for \$360,000. Before running any further split calculations, the broker's office manager wants to confirm what commission rate was actually used in the listing agreement, since the file itself doesn't clearly state the percentage anywhere.

Working backward from the two known figures, the office manager needs to divide the total commission dollar amount by the sale price to solve for the rate as a decimal, then convert that decimal into the percentage the listing agreement must have specified.

Given a \$360,000 sale price and \$18,000 in total commission, what commission rate was used in this transaction?

- A. 6%
- B. 5%
- C. 4.5%
- D. 5.5%

38. A referral-only agent in Peachtree Corners connected a former client with an agent in another state for a relocation sale and earned a flat \$24,000 in referral commission once that out-of-state sale closed, calculated at a 6% commission rate on the eventual sale price of the relocated client's new home.

Because the referral fee was quoted as a flat dollar amount rather than as a percentage, the Georgia agent's bookkeeper wants to work backward to confirm what sale price must have generated that \$24,000 figure at the stated 6% rate, just to double-check the numbers before filing the paperwork.

If a 6% commission rate produced \$24,000 in commission, what was the sale price of the home?

- A. \$400,000
- B. \$360,000
- C. \$440,000
- D. \$480,000

39. A home in Fayetteville sold for \$275,000 with a standard 6% total commission, but this particular deal involved three separate agents: the listing agent, the buyer's agent, and a referral agent who introduced the buyer to their agent and is entitled to an equal one-third share of the total commission under their referral agreement.

The brokerage's accounting department is preparing three separate disbursement checks and wants to confirm the total commission amount first, then divide that figure evenly three ways since all three parties agreed to an equal split rather than a weighted one.

Given a \$275,000 sale price, a 6% total commission rate, and an equal three-way split, how much does each of the three parties receive?

- A. \$5,000
- B. \$5,500
- C. \$6,500
- D. \$6,000

40. A luxury home in Johns Creek sold for \$520,000 with a total commission rate of 5%, and the listing side is entitled to exactly half of that total commission under the listing agreement. However, the listing agent originally found this seller through a paid referral service that takes 25% of whatever the listing side ultimately earns from any referred deal.

The listing brokerage's bookkeeper needs to work through this calculation in careful stages: first the total commission from the sale, then the listing side's half of that total, and finally the 25% referral fee that must be subtracted from the listing side's share before arriving at the brokerage's true net proceeds from the deal.

Given a \$520,000 sale price, a 5% total commission rate, a 50% listing-side split, and a 25% referral fee taken from the listing side's share, what is the listing brokerage's final net commission after the referral fee is paid?

- A. \$13,000
- B. \$9,750
- C. \$11,700
- D. \$10,400

41. A land buyer near Cumming is evaluating a rural parcel advertised as measuring 217,800 square feet, a figure pulled directly from the county's plat map rather than expressed in acres, which is how the buyer is used to thinking about rural land after growing up on a family farm.

Before making an offer, the buyer wants to convert this square footage figure into acres so she can compare it apples-to-apples against several other rural listings in the same county that were all advertised using acreage rather than raw square footage.

Using the conversion of 1 acre = 43,560 square feet, how many acres does this 217,800 square-foot parcel contain?

- A. 4 acres
- B. 6 acres
- C. 4.5 acres
- D. 5 acres

42. A hobby farmer outside Winder is considering a parcel listed at 130,680 square feet, a number the listing agent pulled straight from the survey without converting it to acres, since the seller had the exact square footage handy from a recent boundary survey.

The hobby farmer wants at least 3 acres to accommodate a small barn, a fenced pasture, and a modest garden area, so before scheduling a showing, he wants to confirm whether this parcel actually meets his minimum acreage requirement.

Using the conversion of 1 acre = 43,560 square feet, how many acres does this 130,680 square-foot parcel contain?

- A. 2 acres
- B. 3.5 acres
- C. 4 acres
- D. 3 acres

43. A rectangular parcel near Monroe measures exactly 660 feet by 660 feet according to the county survey, a perfect square shape that makes the area calculation straightforward once the buyer's agent multiplies the two dimensions together.

The buyer, a small-scale timber investor, specifically asked his agent for the acreage figure rather than the raw square footage, since acreage is the standard unit used in the timber industry when pricing land for its harvestable timber value.

Given a rectangular parcel measuring 660 feet by 660 feet, and using the conversion of 1 acre = 43,560 square feet, how many acres does this parcel contain?

- A. 8 acres
- B. 12 acres
- C. 9 acres
- D. 10 acres

44. A land developer in Cherokee County has agreed to purchase a large tract at a negotiated price of \$150,000 per acre, a common way rural and pre-development land is priced in the area rather than as a single lump-sum figure for the whole parcel.

The tract in question spans exactly 2 acres according to the recorded survey, and the developer's attorney needs the total purchase price calculated clearly for the purchase agreement, multiplying the per-acre price by the total acreage involved.

Given a price of \$150,000 per acre and a parcel of exactly 2 acres, what is the total purchase price for this tract?

- A. \$300,000
- B. \$250,000
- C. \$275,000
- D. \$325,000

45. An agricultural investor is purchasing a working farm in south Georgia consisting of 4.5 acres of tillable farmland, priced at a negotiated rate of \$20,000 per acre based on recent comparable sales of similar farmland in the surrounding county.

The investor's lender requires a clear breakdown of the land value as part of the appraisal package, and the appraiser needs to calculate the total land value by multiplying the per-acre price by the exact acreage figure from the recorded legal description.

Given a price of \$20,000 per acre and a parcel of 4.5 acres, what is the total value of this farmland?

- A. \$85,000
- B. \$90,000
- C. \$95,000
- D. \$100,000

46. A survey crew working outside Rome, Georgia has measured a rectangular parcel at exactly 1,320 feet by 1,320 feet, a common size for larger rural tracts in that part of the state where land is often subdivided along quarter-quarter-section lines from the original land lot system.

The landowner wants the acreage figure confirmed independently before listing the property for sale, since the county tax records show a slightly different figure that she suspects may be based on an older, less precise survey from decades earlier.

Given a rectangular parcel measuring 1,320 feet by 1,320 feet, and using the conversion of 1 acre = 43,560 square feet, how many acres does this parcel contain?

- A. 36 acres
- B. 40 acres
- C. 44 acres
- D. 38 acres

47. A small residential lot in a new subdivision near Hoschton is listed at 87,120 square feet, a figure the builder's marketing materials list alongside the square footage of the home itself, which sometimes confuses buyers who aren't sure whether the number refers to the lot or the house.

A prospective buyer comparing this lot against others in the area, all listed in acres rather than square feet, wants to convert this figure so she can make an accurate side-by-side comparison before deciding which lot offers the best value for her planned home design.

Using the conversion of 1 acre = 43,560 square feet, how many acres does this 87,120 square-foot lot contain?

- A. 1.5 acres
- B. 2 acres
- C. 2.5 acres
- D. 1 acre

48. A rural road frontage listing near Dahlonga describes a parcel with 2.5 miles of frontage along a scenic county road, a feature the listing agent highlighted prominently since road frontage of that length is unusually valuable for the equestrian buyers this property is being marketed toward.

A buyer's agent working with an out-of-state equestrian client wants to convert this frontage figure into feet, since her client is more accustomed to thinking in feet when evaluating fence lines and pasture layouts for horse properties back home.

Using the conversion of 1 mile = 5,280 feet, how many feet of road frontage does this 2.5-mile stretch represent?

- A. 13,200 feet
- B. 12,600 feet
- C. 13,000 feet
- D. 12,800 feet

49. A surveyor working on a boundary dispute near Blairsville has measured one contested property line at exactly 10,560 feet, a figure that needs to be converted into miles for a legal filing that references distances in miles rather than feet throughout the rest of the document.

The surveyor's assistant is double-checking the conversion by hand before the final report goes out, since an error in unit conversion on a legal boundary document could create real problems for both landowners involved in the dispute.

Using the conversion of 1 mile = 5,280 feet, how many miles does a distance of 10,560 feet represent?

- A. 1.5 miles
- B. 2.5 miles
- C. 2 miles
- D. 3 miles

50. A land buyer looking at rural property in south Georgia keeps encountering the term "section" in old deed descriptions, a unit of land measurement tied to the historical rectangular survey system used to divide large areas of land into standardized parcels going back generations.

His real estate attorney explains that a full section is simply defined as one square mile, and that understanding this base unit is the key to making sense of every smaller subdivision described in the old deed, since all of those smaller divisions are fractions of this same starting unit.

By definition, how many acres are contained in one full section of land (one square mile)?

- A. 320 acres
- B. 160 acres
- C. 640 acres
- D. 480 acres

51. Continuing to review the same old deed description, the buyer's attorney now needs to explain what a "quarter section" means, since that exact phrase appears in the legal description defining the specific parcel the buyer is actually interested in purchasing.

Rather than looking up a separate reference table, the attorney shows the buyer that a quarter section is simply one-fourth of the full 640-acre section already established, making the calculation a straightforward division problem once the base unit is known.

Given that one full section equals 640 acres, how many acres are in a quarter section?

- A. 120 acres
- B. 200 acres
- C. 160 acres
- D. 180 acres

52. A parcel outside Cordele is legally described as measuring a half mile by a half mile, a description the seller's attorney pulled directly from the original deed rather than providing a modern acreage figure, leaving the buyer's side to work out the acreage themselves before finalizing an offer.

The buyer's agent converts each half-mile dimension into feet first, since the standard acreage conversion formula requires square footage as a starting point, and a half mile is a common enough figure that converting it accurately matters for getting the final acreage right.

Given a parcel measuring a half mile by a half mile, and using the conversions of 1 mile = 5,280 feet and 1 acre = 43,560 square feet, how many acres does this parcel contain?

- A. 160 acres
- B. 120 acres
- C. 200 acres
- D. 180 acres

53. A long, narrow parcel near Fitzgerald is described in an old deed as measuring a quarter mile by a full mile, an unusually elongated shape that the buyer's agent explains was common for land originally divided to give multiple landowners access to a shared water source running along one edge.

To calculate the acreage from this description, the agent converts both the quarter-mile and full-mile dimensions into feet first, then multiplies them together to find the total square footage before applying the standard acreage conversion.

Given a parcel measuring a quarter mile by a full mile, and using the conversions of 1 mile = 5,280 feet and 1 acre = 43,560 square feet, how many acres does this parcel contain?

- A. 120 acres
- B. 200 acres
- C. 160 acres
- D. 180 acres

54. An investor in Stone Mountain recently closed on a small rental duplex that sold for \$240,000, with the property generating \$2,000 in gross monthly rent from its two units combined at the time of sale. Her agent used this completed sale as a comparable to help price a similar duplex she's now considering purchasing a few blocks away.

Before applying this comparable to the new property, the agent first needs to calculate the gross rent multiplier (GRM) that the completed sale actually produced, since that ratio is what will ultimately get applied to the new property's own monthly rent to estimate a fair asking price.

Using the GRM formula of $\text{Sale Price} \div \text{Monthly Gross Rent}$, what GRM did this \$240,000 duplex sale produce, given \$2,000 in gross monthly rent?

- A. 120
- B. 100
- C. 110
- D. 130

55. A small apartment building in East Point generates \$1,800 in gross monthly rental income across all of its units combined, and the seller's agent has pulled a GRM of 100 from a very similar recently sold comparable property just two streets over, generating the same type of income at a similar rent level.

Using that comparable's GRM as a benchmark, the agent now wants to estimate a reasonable listing price for this building by applying the same GRM multiplier to this building's own \$1,800 in monthly gross rent, following the standard income-approach logic used for small multifamily properties.

Using a GRM of 100 and \$1,800 in monthly gross rent, what estimated value does the GRM approach produce for this property?

- A. \$170,000
- B. \$190,000
- C. \$180,000
- D. \$200,000

56. A fourplex in Riverdale recently sold for \$360,000, and county records show the property was generating \$3,000 in gross monthly rent across its four units combined at the time the sale closed, based on the rent roll the seller provided during due diligence.

An appraiser working on an unrelated file needs this sale's GRM as one of several comparables she's compiling for an income-approach valuation report, requiring her to divide the sale price by the monthly gross rent to arrive at the multiplier this particular sale actually produced.

Using the GRM formula of $\text{Sale Price} \div \text{Monthly Gross Rent}$, what GRM did this \$360,000 fourplex sale produce, given \$3,000 in gross monthly rent?

- A. 110
- B. 130
- C. 120
- D. 140

57. A small rental home in Hapeville generates \$2,500 in gross monthly rent from a long-term tenant who has occupied the property for several years without a single missed payment, making it an attractive, stable income property for a buyer focused on cash flow rather than appreciation.

The listing agent has identified a comparable GRM of 110 from a recently closed sale of a similar rental home nearby, and wants to apply that same multiplier to this property's \$2,500 monthly rent to arrive at a supportable estimated value for the listing price recommendation.

Using a GRM of 110 and \$2,500 in monthly gross rent, what estimated value does the GRM approach produce for this property?

- A. \$260,000
- B. \$275,000
- C. \$250,000
- D. \$285,000

58. An investor in Forest Park purchased a small rental portfolio consisting of a single property that sold for \$500,000, generating \$4,000 per month in gross rent at the time of the sale according to the leases assigned to the buyer as part of the closing.

A competing investor eyeing a similar property nearby wants to use this sale as a direct comparable, and asks his agent to calculate the exact GRM the sale produced so he can apply that same multiplier when evaluating whether his own target property is fairly priced.

Using the GRM formula of $\text{Sale Price} \div \text{Monthly Gross Rent}$, what GRM did this \$500,000 sale produce, given \$4,000 in gross monthly rent?

- A. 135
- B. 115
- C. 150
- D. 125

59. A comparable rental property recently sold for \$300,000 while generating \$2,500 in gross monthly rent, giving an appraiser a clean comparable GRM to apply toward valuing a different, similar subject property she's currently working on for a lending client.

The subject property she's valuing generates a higher gross monthly rent of \$2,800, reflecting slightly larger unit sizes than the comparable, and she needs to apply the comparable's GRM to this higher rent figure to estimate the subject property's value under the income approach.

First calculate the GRM from the \$300,000 comparable sale with \$2,500 monthly rent, then apply that GRM to the subject property's \$2,800 monthly rent. What estimated value results for the subject property?

- A. \$326,000
- B. \$350,000
- C. \$336,000
- D. \$342,000

60. A small rental bungalow in Union City generates \$3,200 in gross monthly rent, and the listing agent has selected a GRM of 90 based on several recent comparable sales of similar single-tenant rental homes in the immediate area, all clustering around that same multiplier.

Using this GRM as the basis for a listing price recommendation, the agent wants to present the seller with a clear, defensible estimated value calculation before their upcoming listing appointment, showing exactly how the recommended price was derived from the property's own rental income.

Using a GRM of 90 and \$3,200 in monthly gross rent, what estimated value does the GRM approach produce for this property?

- A. \$288,000
- B. \$308,000
- C. \$278,000
- D. \$298,000

61. A small commercial strip center near Conyers sold for \$400,000, generating \$50,000 in gross annual income from its collection of retail tenants at the time the sale closed, according to the rent roll and operating statements provided during the buyer's due diligence period.

Unlike a residential GRM calculation, which uses monthly rent, this commercial appraiser is working with annual income figures throughout her report and needs to calculate the gross income multiplier (GIM) this particular sale produced using the property's full annual income rather than a monthly figure.

Using the GIM formula of $\text{Sale Price} \div \text{Annual Gross Income}$, what GIM did this \$400,000 commercial sale produce, given \$50,000 in gross annual income?

- A. 8
- B. 7.5
- C. 9
- D. 6.5

62. A small office building generates \$60,000 in gross annual income from its mix of professional tenants, and a recently closed comparable sale nearby produced a GIM of 7.5, giving the appraiser working on this file a clean, well-supported multiplier to apply to the subject property's own income figures.

Applying that comparable GIM directly to the subject property's \$60,000 in annual gross income follows the same logic as the residential GRM approach, just substituted with annual figures throughout rather than monthly ones, which is standard practice for commercial income properties.

Using a GIM of 7.5 and \$60,000 in annual gross income, what estimated value does the GIM approach produce for this property?

- A. \$450,000
- B. \$470,000
- C. \$430,000
- D. \$490,000

63. A mixed-use retail and office building sold for \$650,000, and the seller's operating statements showed \$100,000 in gross annual income from the combined retail and office tenants occupying the property at the time of sale, verified against three years of tax returns during due diligence.

A commercial appraiser reviewing this sale as a comparable for an unrelated valuation assignment needs to calculate the GIM this sale produced, dividing the sale price by the verified annual gross income figure to arrive at a defensible multiplier for her report.

Using the GIM formula of $\text{Sale Price} \div \text{Annual Gross Income}$, what GIM did this \$650,000 sale produce, given \$100,000 in gross annual income?

- A. 5.5
- B. 7
- C. 6
- D. 6.5

64. A small commercial property generates \$45,000 in gross annual income from a single long-term tenant on a triple-net lease, and the appraiser assigned to this file has identified a strong comparable sale that produced a GIM of 8, based on a very similar single-tenant net-leased property that sold just a few months earlier.

Applying this comparable GIM directly to the subject property's \$45,000 in annual gross income will give the appraiser a supportable, income-based estimate of value to include alongside her other valuation approaches in the final report.

Using a GIM of 8 and \$45,000 in annual gross income, what estimated value does the GIM approach produce for this property?

- A. \$340,000
- B. \$380,000
- C. \$400,000
- D. \$360,000

65. A commercial warehouse property sold for \$900,000, generating \$120,000 in gross annual income from a single industrial tenant under a long-term lease, according to the lease abstract provided to the buyer's lender as part of the loan underwriting process.

An analyst at the lender's commercial lending division needs to calculate this sale's GIM as part of a broader market study on industrial property multipliers in the region, dividing the sale price by the verified annual gross income figure from the lease abstract.

Using the GIM formula of $\text{Sale Price} \div \text{Annual Gross Income}$, what GIM did this \$900,000 warehouse sale produce, given \$120,000 in gross annual income?

- A. 6.5
- B. 8.5
- C. 7.5
- D. 7

66. A comparable commercial property recently sold for \$550,000 while generating \$88,000 in gross annual income, giving an appraiser a clean comparable GIM to apply toward valuing a different, similar subject property she's currently working on for a refinance appraisal.

The subject property she's valuing generates a higher gross annual income of \$96,000, reflecting a recently signed lease at a higher rate than the prior tenant's, and she needs to apply the comparable's GIM to this higher income figure to estimate the subject property's value.

First calculate the GIM from the \$550,000 comparable sale with \$88,000 annual income, then apply that GIM to the subject property's \$96,000 annual income. What estimated value results for the subject property?

- A. \$600,000
- B. \$580,000
- C. \$620,000
- D. \$640,000

67. A small commercial building generates \$52,000 in gross annual income, and the appraiser working on this file has selected a GIM of 9 based on several recent comparable sales of similar small commercial buildings in the immediate submarket, all clustering closely around that same multiplier.

Using this GIM as the primary basis for her income-approach value conclusion, the appraiser wants to show her calculation clearly in the final report so the lender reviewing the appraisal can trace exactly how the concluded value was derived from the property's own income.

Using a GIM of 9 and \$52,000 in annual gross income, what estimated value does the GIM approach produce for this property?

- A. \$458,000
- B. \$478,000
- C. \$448,000
- D. \$468,000

68. A small apartment building in Lithonia generates \$120,000 in gross operating income annually, against \$45,000 in annual operating expenses covering maintenance, property management, insurance, and property taxes, based on the trailing twelve months of financials the seller provided during due diligence.

Before an investor can apply a market capitalization rate to value this property, his analyst first needs to calculate the net operating income (NOI), which is simply the gross operating income minus operating expenses, explicitly excluding any debt service or income taxes from the calculation.

Using the formula $\text{NOI} = \text{Gross Operating Income} - \text{Operating Expenses}$, what is the NOI for this property given \$120,000 in gross operating income and \$45,000 in operating expenses?

- A. \$75,000
- B. \$65,000
- C. \$85,000
- D. \$70,000

69. An investment property generates \$80,000 in annual NOI, and the buyer's agent has identified a market capitalization rate of 8% based on several recent comparable sales of similar income properties in the same submarket, giving the buyer a solid benchmark for evaluating a fair purchase price.

Applying the income capitalization approach, the agent wants to calculate the indicated value of this property by dividing its NOI by the market cap rate, which is the standard method used to convert an income stream into an estimated property value.

Using the formula $\text{Value} = \text{NOI} \div \text{Cap Rate}$, what is the indicated value of this property given \$80,000 in NOI and an 8% cap rate?

- A. \$900,000
- B. \$950,000
- C. \$1,000,000
- D. \$1,050,000

70. A commercial property recently sold for \$600,000, and the buyer's due diligence confirmed the property was generating \$54,000 in annual NOI at the time of sale, based on verified operating statements the seller provided as part of the purchase agreement.

An appraiser using this sale as a comparable in an unrelated assignment needs to calculate the capitalization rate this particular sale actually reflects, since that derived cap rate can then be applied to other similar properties as a market-supported benchmark.

Using the formula $\text{Cap Rate} = \text{NOI} \div \text{Value}$, what capitalization rate does this \$600,000 sale reflect, given \$54,000 in annual NOI?

- A. 9%
- B. 8%
- C. 10%
- D. 7.5%

71. A small shopping center generates \$200,000 in gross operating income annually, and the seller's financial statements show that operating expenses consistently run at 40% of gross operating income, a ratio the property has maintained steadily for the past several years of ownership.

An investor evaluating this property for purchase wants to calculate the actual NOI rather than relying on the gross income figure alone, since NOI is what ultimately drives the property's value under the income capitalization approach he plans to use for his offer.

Given \$200,000 in gross operating income and operating expenses equal to 40% of that figure, what is this property's NOI?

- A. \$100,000
- B. \$110,000
- C. \$120,000
- D. \$130,000

72. An investor is evaluating an apartment complex expected to sell for \$750,000, and market data for comparable properties in the area consistently shows a capitalization rate of 7.5% being applied to similar income-producing assets in the current market.

Before making an offer, the investor's analyst wants to work backward from the expected sale price and market cap rate to determine what NOI this property would need to generate in order to justify that \$750,000 valuation under the income capitalization approach.

Using the formula $\text{NOI} = \text{Value} \times \text{Cap Rate}$, what NOI would this property need to generate to support a \$750,000 value at a 7.5% cap rate?

- A. \$52,500
- B. \$60,000
- C. \$48,750
- D. \$56,250

73. A commercial office building sold for \$1,200,000, and the buyer's underwriting confirmed the property was generating \$96,000 in annual NOI at the time of the sale, verified against three years of audited operating statements the seller's accounting firm provided during due diligence.

A commercial lender reviewing this sale as part of a broader market study wants to calculate the capitalization rate this transaction reflects, since that figure will help establish current market cap rate trends for similar office properties in the region.

Using the formula $\text{Cap Rate} = \text{NOI} \div \text{Value}$, what capitalization rate does this \$1,200,000 sale reflect, given \$96,000 in annual NOI?

- A. 8%
- B. 7%
- C. 9%
- D. 6.5%

74. A small mixed-use building generates \$150,000 in gross operating income annually, with total operating expenses of \$62,000 covering everything from routine maintenance to property management fees, based on the seller's most recent full-year financial statements.

An investor evaluating this property wants to apply a market capitalization rate of 8.8%, which her agent identified from several comparable sales, to calculate an indicated value once she has first worked out the property's actual NOI from the income and expense figures provided.

First calculate the NOI given \$150,000 in gross operating income and \$62,000 in operating expenses, then use that NOI to find the indicated value at an 8.8% cap rate.

- A. \$1,000,000
- B. \$1,050,000
- C. \$950,000
- D. \$975,000

75. A real estate investment fund has set a target capitalization rate of 6% for all new acquisitions in its portfolio strategy, and the fund's acquisitions team is evaluating a property expected to sell for \$850,000 against this fixed target rate before committing to make an offer.

To determine whether this specific property could realistically meet the fund's investment criteria, the acquisitions analyst needs to calculate exactly what NOI the property would need to generate at the \$850,000 price point in order to hit the fund's required 6% target cap rate.

Using the formula $\text{NOI} = \text{Value} \times \text{Cap Rate}$, what NOI would this property need to generate to meet the fund's 6% target cap rate at an \$850,000 price?

- A. \$48,000
- B. \$54,000
- C. \$51,000
- D. \$42,500

76. A small commercial property generates \$45,000 in annual NOI, and comparable sales in the immediate area consistently support a capitalization rate of 9% for similar small commercial assets, giving the listing agent a solid, defensible basis for recommending an asking price to the seller.

Applying the income capitalization approach directly, the agent wants to calculate the indicated value of this property using its own NOI and the market-supported 9% cap rate, then present that figure to the seller as the foundation for the listing price recommendation.

Using the formula $\text{Value} = \text{NOI} \div \text{Cap Rate}$, what is the indicated value of this property given \$45,000 in NOI and a 9% cap rate?

- A. \$450,000
- B. \$500,000
- C. \$525,000
- D. \$475,000

77. A homeowner in Gwinnett County has received her annual property tax notice, which shows a fair market value of \$500,000 for her home. Under Georgia's statutory rule, her county tax assessor calculates the assessed value at exactly 40% of that fair market value before any millage rate is ever applied.

Her county's combined millage rate for the current tax year is 25 mills, a figure that represents the total of all overlapping taxing authorities, including the county general fund, the school district, and any special service districts that apply to her specific property.

Given a fair market value of \$500,000, Georgia's 40% assessment ratio, and a millage rate of 25 mills, what is this homeowner's annual property tax bill (before any exemptions)?

- A. \$4,500
- B. \$5,500
- C. \$4,000
- D. \$5,000

78. A homeowner in Cobb County has a home with a fair market value of \$375,000, and his most recent notice of assessment confirms the standard Georgia 40% assessment ratio was applied to arrive at his official assessed value for tax purposes this year.

The combined millage rate across all of the taxing authorities with jurisdiction over his property, including the county, school district, and any applicable special districts, comes to 30 mills for the current tax year, according to the rate schedule printed on his tax bill.

Given a fair market value of \$375,000, Georgia's 40% assessment ratio, and a millage rate of 30 mills, what is this homeowner's annual property tax bill (before any exemptions)?

- A. \$5,000
- B. \$4,000
- C. \$4,500
- D. \$4,250

79. A county tax official reviewing a commercial parcel's tax bill sees an annual tax amount of \$3,600 on record, along with an assessed value of \$180,000 for the property, but the millage rate itself isn't listed anywhere on the abbreviated summary sheet she's working from.

To reconstruct the missing figure for her records, she needs to work backward from the two numbers she does have, dividing the tax amount by the assessed value and then converting that result into mills rather than leaving it as a decimal tax rate.

Given an assessed value of \$180,000 and an annual tax bill of \$3,600, what millage rate was applied to this property?

- A. 18 mills
- B. 20 mills
- C. 22 mills
- D. 25 mills

80. A homeowner in Fayette County has a home with a fair market value of \$625,000, well above the county median, reflecting a recent addition and full kitchen renovation that increased the assessor's opinion of the home's current market value significantly over the prior year's assessment.

The county's combined millage rate for this tax year is 18 mills, a relatively modest rate compared to some neighboring counties, and the homeowner's accountant wants to confirm the exact tax liability before finalizing the homeowner's annual budget projections.

Given a fair market value of \$625,000, Georgia's 40% assessment ratio, and a millage rate of 18 mills, what is this homeowner's annual property tax bill (before any exemptions)?

- A. \$5,000
- B. \$4,750
- C. \$4,500
- D. \$5,250

81. A commercial property owner in Clayton County received an annual tax bill of \$5,250 and knows his county's combined millage rate is 35 mills for the current tax year, but the assessed value figure was accidentally omitted from the abbreviated bill his property manager forwarded to him.

To confirm the bill is accurate before authorizing payment, he wants to work backward from the known tax amount and millage rate to reconstruct the assessed value the county must have used, since that figure should also reconcile against 40% of the property's known fair market value.

Given an annual tax bill of \$5,250 and a millage rate of 35 mills, what assessed value did the county use to calculate this tax bill?

- A. \$140,000
- B. \$160,000
- C. \$150,000
- D. \$130,000

82. A homeowner in Forsyth County has a home valued at \$800,000 on the county's most recent notice of fair market value, reflecting strong appreciation in her rapidly growing neighborhood over the past several years since she originally purchased the home.

Her county's combined millage rate for the current tax year is set at 22.5 mills, a figure that includes the county general fund, school district, and fire district portions all combined into a single rate applied uniformly to her assessed value.

Given a fair market value of \$800,000, Georgia's 40% assessment ratio, and a millage rate of 22.5 mills, what is this homeowner's annual property tax bill (before any exemptions)?

- A. \$6,800
- B. \$7,000
- C. \$7,500
- D. \$7,200

83. A small rural property in Pike County has a fair market value of \$225,000 according to the county's most recent countywide reassessment, which was conducted for the first time in nearly six years due to the county's historically slower rate of value changes compared to metro-area counties.

The county's combined millage rate remains relatively low at 40 mills, a figure that reflects the modest budget needs of a smaller, rural county government compared to the higher rates typically seen in fast-growing metro Atlanta counties.

Given a fair market value of \$225,000, Georgia's 40% assessment ratio, and a millage rate of 40 mills, what is this homeowner's annual property tax bill (before any exemptions)?

- A. \$3,200
- B. \$3,600
- C. \$3,400
- D. \$3,800

84. A first-time buyer in Douglasville is purchasing a home with a conventional loan of \$200,000 after making a down payment below the 20% threshold that would otherwise allow her to avoid mortgage insurance entirely, meaning her lender requires PMI on the loan going forward.

Her lender has quoted an annual PMI rate of 0.5% of the loan amount, a figure based on her credit profile and loan-to-value ratio, and her loan officer needs to translate that annual figure into both the total annual cost and the monthly amount that will be added to her regular mortgage payment.

Using an annual PMI rate of 0.5% on a \$200,000 loan, what are the annual and monthly PMI amounts for this borrower?

- A. \$1,000 annual / \$83.33 monthly
- B. \$1,200 annual / \$100 monthly
- C. \$800 annual / \$66.67 monthly
- D. \$1,500 annual / \$125 monthly

85. A borrower in Rockdale County is financing \$250,000 for a home purchase with a smaller-than-ideal down payment, triggering a PMI requirement from his lender at an annual rate of 0.75%, reflecting a slightly higher rate than a borrower with a larger down payment or stronger credit profile might receive.

His loan officer is preparing a full monthly payment breakdown for the borrower's pre-approval letter, and needs to calculate both the annual PMI cost and the monthly amount that will be added on top of his principal, interest, taxes, and insurance.

Using an annual PMI rate of 0.75% on a \$250,000 loan, what are the annual and monthly PMI amounts for this borrower?

- A. \$2,000 annual / \$166.67 monthly
- B. \$1,750 annual / \$145.83 monthly
- C. \$1,625 annual / \$135.42 monthly
- D. \$1,875 annual / \$156.25 monthly

86. A borrower purchasing a home in Henry County is financing \$180,000 with a loan that requires PMI at an annual rate of 1%, a rate on the higher end of the typical PMI range, reflecting a combination of the borrower's credit score and a relatively small down payment compared to the purchase price.

Before closing, the lender's disclosure documents need to clearly itemize the PMI cost separately from the base mortgage payment, showing both the annual total and the monthly amount the borrower will see added to the escrow portion of her monthly payment.

Using an annual PMI rate of 1% on a \$180,000 loan, what are the annual and monthly PMI amounts for this borrower?

- A. \$2,000 annual / \$166.67 monthly
- B. \$1,600 annual / \$133.33 monthly
- C. \$1,800 annual / \$150 monthly
- D. \$1,900 annual / \$158.33 monthly

87. A borrower's monthly PMI payment is \$100 according to the mortgage statement he just received, on a loan amount of \$240,000, but the statement doesn't explicitly list the annual PMI rate that lenders typically use when quoting this type of insurance to borrowers.

Curious about how his rate compares to typical market rates he's read about, he wants to work backward from his known monthly payment and loan amount to calculate the annual PMI rate his lender actually applied to his loan.

Given a monthly PMI payment of \$100 on a \$240,000 loan, what annual PMI rate did the lender apply to this loan?

- A. 0.6%
- B. 0.4%
- C. 0.75%
- D. 0.5%

88. A buyer in Paulding County is purchasing a \$300,000 home with a 10% down payment, financing the remaining 90% of the purchase price through a conventional loan that requires PMI because the down payment falls well short of the 20% threshold most lenders use as their PMI cutoff.

Her lender has quoted an annual PMI rate of 0.6% based on her loan-to-value ratio and credit profile, and her loan officer first needs to calculate the actual loan amount from the purchase price and down payment before applying that PMI rate to arrive at the annual and monthly PMI costs.

Given a \$300,000 purchase price, a 10% down payment, and an annual PMI rate of 0.6%, what are the loan amount and the resulting monthly PMI payment?

- A. \$270,000 loan / \$150 monthly
- B. \$280,000 loan / \$140 monthly
- C. \$270,000 loan / \$135 monthly
- D. \$260,000 loan / \$130 monthly

89. A borrower in Coweta County is financing \$220,000 for a home purchase, and her lender has quoted an annual PMI rate of 0.85%, a rate reflecting her particular combination of credit score, loan-to-value ratio, and the specific PMI program her lender is using for this loan.

As part of finalizing her loan estimate disclosure, the loan officer needs to calculate both the annual and monthly PMI figures precisely, since these numbers will appear on the official disclosure document she is required to review and sign before closing.

Using an annual PMI rate of 0.85% on a \$220,000 loan, what are the annual and monthly PMI amounts for this borrower (rounded to the nearest cent)?

- A. \$1,950 annual / \$162.50 monthly
- B. \$1,800 annual / \$150.00 monthly
- C. \$1,700 annual / \$141.67 monthly
- D. \$1,870 annual / \$155.83 monthly

90. A buyer in Bartow County is purchasing a \$400,000 home with a 10% down payment, financing 90% of the purchase price, and her lender has quoted an annual PMI rate of 0.55% based on her overall borrower profile and the specifics of the loan program she selected.

Her loan officer needs to first calculate the actual loan amount from the purchase price and down payment percentage, then apply the quoted PMI rate to that loan amount to determine both the annual PMI cost and the monthly amount that will show up in her escrow payment.

Given a \$400,000 purchase price, a 10% down payment, and an annual PMI rate of 0.55%, what are the loan amount and the resulting monthly PMI payment (rounded to the nearest cent)?

- A. \$360,000 loan / \$165 monthly
- B. \$360,000 loan / \$150 monthly
- C. \$370,000 loan / \$170 monthly
- D. \$350,000 loan / \$160 monthly

91. A homeowner in Villa Rica is installing new hardwood flooring throughout her rectangular living room, which measures 12 feet by 15 feet according to the measurements her flooring contractor took during his initial visit to prepare an accurate materials estimate for the project.

Before ordering the hardwood planks, the contractor needs to calculate the exact square footage of the room, since flooring materials are priced and sold by the square foot, and an undercalculation could leave the homeowner short of material partway through installation.

Given a rectangular room measuring 12 feet by 15 feet, what is the square footage of this room?

- A. 170 sq ft
- B. 180 sq ft
- C. 190 sq ft
- D. 160 sq ft

92. A landscaper quoting a sod installation job in Carrollton has measured a client's backyard area at exactly 180 square feet, but the sod supplier he works with prices and sells sod exclusively by the square yard rather than by the square foot, requiring a unit conversion before he can finalize his materials order.

Rather than risk a costly ordering mistake, the landscaper wants to double-check the conversion carefully, knowing that square yards and square feet aren't related by the same simple factor as linear yards and linear feet, since area conversions require squaring the linear conversion factor.

Given an area of 180 square feet, and knowing that 1 square yard equals 9 square feet, how many square yards does this area represent?

- A. 18 sq yd
- B. 22 sq yd
- C. 16 sq yd
- D. 20 sq yd

93. A homeowner in Newnan is installing a new fence around the perimeter of his rectangular backyard, which measures 40 feet by 60 feet according to the property survey he pulled before calling fence contractors for quotes on the project.

Because fence contractors typically price their work by the linear foot of fencing installed rather than by the enclosed area, the homeowner needs to calculate the total perimeter of his rectangular yard before he can meaningfully compare quotes from the three contractors he's considering.

Given a rectangular yard measuring 40 feet by 60 feet, what is the total perimeter of this yard?

- A. 200 feet
- B. 180 feet
- C. 220 feet
- D. 240 feet

94. A homeowner in Fairburn is having a small in-ground pool installed in his backyard, with the excavation contractor specifying a rectangular hole measuring 10 feet by 10 feet at the surface, extending down to a uniform depth of 8 feet throughout the entire footprint of the pool.

Before scheduling the excavation equipment and disposal trucks, the contractor needs to calculate the total volume of dirt that will need to be removed, since the trucking company charges by cubic yardage and needs an accurate volume figure to schedule the right number of truck trips.

Given a rectangular excavation measuring 10 feet by 10 feet with a uniform depth of 8 feet, what is the total volume in cubic feet that will need to be excavated?

- A. 900 cubic feet
- B. 800 cubic feet
- C. 750 cubic feet
- D. 850 cubic feet

95. A commercial real estate broker in East Cobb is preparing marketing materials for a rectangular warehouse space that measures 100 feet by 150 feet, dimensions pulled directly from the building's architectural plans provided by the property owner.

Because industrial and warehouse space is almost always marketed and leased based on total square footage rather than the individual room-by-room dimensions used in residential listings, the broker needs the precise square footage figure to include prominently in the listing flyer.

Given a rectangular warehouse measuring 100 feet by 150 feet, what is the total square footage of this space?

- A. 14,000 sq ft
- B. 16,000 sq ft
- C. 15,000 sq ft
- D. 13,500 sq ft

96. A land buyer near Senoia is evaluating a rural parcel described in the listing as containing 15,000 square feet, a relatively small figure that made the buyer wonder whether the listing agent had simply mislabeled the property's actual acreage as square footage by mistake.

To settle the question, the buyer's own agent converts the stated square footage into acres using the standard conversion factor, confirming for the buyer exactly how small a parcel this actually is compared to the multi-acre rural properties she had been touring earlier that same week.

Using the conversion of 1 acre = 43,560 square feet, approximately how many acres does a 15,000 square-foot parcel represent (rounded to two decimal places)?

- A. 0.44 acres
- B. 0.34 acres
- C. 0.29 acres
- D. 0.50 acres

97. A tile installer in Peachtree City is working on a rectangular bathroom floor and has calculated the total area needing tile at 300 square feet, but the specific porcelain tile the homeowner selected is sold in a fixed-width roll pattern that the installer needs to convert into a specific linear dimension to plan the cutting layout.

Given that the tile pattern comes in a consistent 15-foot width for this particular product line, the installer needs to calculate what total length of that 15-foot-wide material would be required to cover the full 300 square feet of bathroom floor space.

Given an area of 300 square feet and a fixed material width of 15 feet, what length of material is needed to cover this area?

- A. 18 feet
- B. 22 feet
- C. 25 feet
- D. 20 feet

98. A homeowner in Sharpsburg is installing a decorative border around the perimeter of his rectangular front yard, which measures 50 feet by 80 feet according to the measurements he took himself using a long tape measure borrowed from a neighbor.

Before ordering the decorative edging material, which is sold by the linear foot at his local home improvement store, he needs to calculate the total perimeter of the rectangular yard to know exactly how much material to purchase for the full border.

Given a rectangular yard measuring 50 feet by 80 feet, what is the total perimeter of this yard?

- A. 250 feet
- B. 220 feet
- C. 260 feet
- D. 240 feet

99. A land surveyor near Zebulon has confirmed a rural parcel measures exactly 5 acres according to the recorded plat, but the buyer's engineer needs the equivalent square footage figure for a septic system design calculation that requires input in square feet rather than acres.

Converting from acres back to square feet uses the same 43,560 conversion factor as converting the other direction, just applied as multiplication instead of division, since the engineer needs to scale the known acreage figure up into the larger square-footage unit.

Using the conversion of 1 acre = 43,560 square feet, how many square feet are contained in a 5-acre parcel?

- A. 207,800 sq ft
- B. 227,800 sq ft
- C. 217,800 sq ft
- D. 197,800 sq ft

100. A homeowner in Grantville is having a custom area rug made for her living room and has measured the space where the rug will go at 2,400 square feet... which immediately struck her as far too large for a single room, prompting her to double check her measurement against the room's actual dimensions before placing the rug order.

Her interior designer suspects the confusion stems from the rug supplier's pricing sheet, which lists costs per square yard rather than per square foot, meaning the homeowner needs to convert her 2,400 square-foot figure into square yards before the pricing will make sense in context.

Given an area of 2,400 square feet, and knowing that 1 square yard equals 9 square feet, how many square yards does this area represent (rounded to two decimal places)?

- A. 246.67 sq yd
- B. 286.67 sq yd
- C. 266.67 sq yd
- D. 256.67 sq yd

PART III — ANSWER KEY

Correct answer and full worked solution for each of the 100 practice questions, in the same order as Part II.

1. Correct Answer: A — \$150.00

Worked Solution: $\text{Tax} = (\text{Price} \div 100) \times \$0.10 = (\$150,000 \div 100) \times \$0.10 = \$150.00$. This matches Georgia's full statutory formula exactly since \$150,000 is a multiple of \$100: \$1.00 for the first \$1,000, plus \$0.10 per each additional \$100 of the remaining amount, algebraically collapses to the same single-step calculation.

2. Correct Answer: D — \$220.00

Worked Solution: $\text{Tax} = (\text{Price} \div 100) \times \$0.10 = (\$220,000 \div 100) \times \$0.10 = \$220.00$. This matches Georgia's full statutory formula exactly since \$220,000 is a multiple of \$100: \$1.00 for the first \$1,000, plus \$0.10 per each additional \$100 of the remaining amount, algebraically collapses to the same single-step calculation.

3. Correct Answer: B — \$275.00

Worked Solution: $\text{Tax} = (\text{Price} \div 100) \times \$0.10 = (\$275,000 \div 100) \times \$0.10 = \$275.00$. This matches Georgia's full statutory formula exactly since \$275,000 is a multiple of \$100: \$1.00 for the first \$1,000, plus \$0.10 per each additional \$100 of the remaining amount, algebraically collapses to the same single-step calculation.

4. Correct Answer: D — \$310.00

Worked Solution: $\text{Tax} = (\text{Price} \div 100) \times \$0.10 = (\$310,000 \div 100) \times \$0.10 = \$310.00$. This matches Georgia's full statutory formula exactly since \$310,000 is a multiple of \$100: \$1.00 for the first \$1,000, plus \$0.10 per each additional \$100 of the remaining amount, algebraically collapses to the same single-step calculation.

5. Correct Answer: C — \$425.00

Worked Solution: $\text{Tax} = (\text{Price} \div 100) \times \$0.10 = (\$425,000 \div 100) \times \$0.10 = \$425.00$. This matches Georgia's full statutory formula exactly since \$425,000 is a multiple of \$100: \$1.00 for the first \$1,000, plus \$0.10 per each additional \$100 of the remaining amount, algebraically collapses to the same single-step calculation.

6. Correct Answer: D — \$500.00

Worked Solution: $\text{Tax} = (\text{Price} \div 100) \times \$0.10 = (\$500,000 \div 100) \times \$0.10 = \$500.00$. This matches Georgia's full statutory formula exactly since \$500,000 is a multiple of \$100: \$1.00 for the first \$1,000, plus \$0.10 per each additional \$100 of the remaining amount, algebraically collapses to the same single-step calculation.

7. Correct Answer: B — \$640.00

Worked Solution: $\text{Tax} = (\text{Price} \div 100) \times \$0.10 = (\$640,000 \div 100) \times \$0.10 = \$640.00$. This matches Georgia's full statutory formula exactly since \$640,000 is a multiple of \$100: \$1.00 for the first \$1,000, plus \$0.10 per each additional \$100 of the remaining amount, algebraically collapses to the same single-step calculation.

8. Correct Answer: A — \$300.00

Worked Solution: Intangible tax = Loan Amount $\times$ \$1.50 per \$500, which is the same as Loan $\times$ 0.003 (0.3%). $\$100,000 \times 0.003 = \300.00 . Check by increments: $\$100,000 \div \$500 = 200$ increments $\times$ \$1.50 = \$300.00.

9. Correct Answer: B — \$450.00

Worked Solution: Intangible tax = Loan $\times$ 0.003 = $\$150,000 \times 0.003 = \450.00 . Check by increments: $\$150,000 \div \$500 = 300$ increments $\times$ \$1.50 = \$450.00.

10. Correct Answer: B — \$600.00

Worked Solution: Intangible tax = Loan $\times$ 0.003 = $\$200,000 \times 0.003 = \600.00 . Check by increments: $\$200,000 \div \$500 = 400$ increments $\times$ \$1.50 = \$600.00.

11. Correct Answer: A — \$750.00

Worked Solution: Intangible tax = Loan $\times$ 0.003 = $\$250,000 \times 0.003 = \750.00 . Check by increments: $\$250,000 \div \$500 = 500$ increments $\times$ \$1.50 = \$750.00.

12. Correct Answer: A — \$900.00

Worked Solution: Intangible tax = Loan $\times$ 0.003 = $\$300,000 \times 0.003 = \900.00 . Check by increments: $\$300,000 \div \$500 = 600$ increments $\times$ \$1.50 = \$900.00.

13. Correct Answer: B — \$1,050.00

Worked Solution: Intangible tax = Loan $\times$ 0.003 = $\$350,000 \times 0.003 = \$1,050.00$. Check by increments: $\$350,000 \div \$500 = 700$ increments $\times \$1.50 = \$1,050.00$.

14. Correct Answer: B — \$25,000.00

Worked Solution: Uncapped, the tax would be $\$10,000,000 \times 0.003 = \$30,000.00$. However, Georgia law caps the intangible recording tax at \$25,000 per note, so the amount actually due is \$25,000.00, regardless of how much higher the uncapped calculation would otherwise be.

15. Correct Answer: D — 25%

Worked Solution: Front-end ratio = $\$1,500 \div \$6,000 = 0.25 = 25\%$. This falls comfortably under the common 28% front-end guideline, though actual limits vary by loan program.

16. Correct Answer: C — 32%

Worked Solution: Front-end ratio = $\$1,600 \div \$5,000 = 0.32 = 32\%$. This exceeds the common 28% guideline, which is why the loan officer flagged it for closer underwriting review.

17. Correct Answer: D — 36%

Worked Solution: Back-end ratio = $\$2,880 \div \$8,000 = 0.36 = 36\%$. This sits right at the common 36% back-end guideline, meaning the file will likely need to be clean in every other respect to gain approval.

18. Correct Answer: C — 37%

Worked Solution: Total monthly debt = $\$1,200$ housing + $\$450$ car payment = $\$1,650$. Back-end ratio = $\$1,650 \div \$4,500 = 0.3667$, which rounds to 37%.

19. Correct Answer: A — \$1,960

Worked Solution: Maximum housing payment = Gross Monthly Income $\times$ Front-End Ratio = $\$7,000 \times 0.28 = \$1,960.00$.

20. Correct Answer: D — \$1,980

Worked Solution: Maximum total monthly debt = Gross Monthly Income $\times$ Back-End Ratio = $\$5,500 \times 0.36 = \$1,980.00$.

21. Correct Answer: D — 34%

Worked Solution: Total monthly debt = \$1,800 housing + \$400 personal loan = \$2,200.
Back-end ratio = $\$2,200 \div \$6,500 = 0.3385$, which rounds to 34%.

22. Correct Answer: B — \$2,250

Worked Solution: Maximum housing payment = Gross Monthly Income $\times$ Front-End Ratio =
 $\$9,000 \times 0.25 = \$2,250.00$.

23. Correct Answer: A — \$1,200.00

Worked Solution: Daily tax rate = $\$3,650 \div 365 = \10.00 per day. Buyer's share = $\$10.00 \times 120 \text{ days} = \$1,200.00$.

24. Correct Answer: B — \$1,600.00

Worked Solution: Daily tax rate = $\$2,920 \div 365 = \8.00 per day. Buyer's share = $\$8.00 \times 200 \text{ days} = \$1,600.00$.

25. Correct Answer: D — \$1,080.00

Worked Solution: Daily tax rate = $\$4,380 \div 365 = \12.00 per day. Buyer's share = $\$12.00 \times 90 \text{ days} = \$1,080.00$.

26. Correct Answer: B — \$1,250.00

Worked Solution: Daily tax rate = $\$1,825 \div 365 = \5.00 per day. Buyer's share = $\$5.00 \times 250 \text{ days} = \$1,250.00$.

27. Correct Answer: D — \$900.00

Worked Solution: Daily tax rate = $\$7,300 \div 365 = \20.00 per day. Buyer's share = $\$20.00 \times 45 \text{ days} = \900.00 .

28. Correct Answer: A — \$210.00

Worked Solution: Daily HOA rate = $\$300 \div 30 = \10.00 per day. Buyer's share = $\$10.00 \times 21 \text{ days} = \210.00 (and the seller's share would be $\$10.00 \times 9 \text{ days} = \90.00 , together totaling the full \$300.00 monthly amount).

29. Correct Answer: C — \$500.00

Worked Solution: Daily rent rate = $\$1,500 \div 30 = \50.00 per day. Buyer's credit = $\$50.00 \times 10 \text{ days} = \500.00 .

30. Correct Answer: A — \$2,000.00

Worked Solution: Daily rate (360-day method) = $\$3,600 \div 360 = \10.00 per day. Buyer's share = $\$10.00 \times 200 \text{ days} = \$2,000.00$.

31. Correct Answer: B — \$1,200.00

Worked Solution: Daily rent rate = $\$2,400 \div 30 = \80.00 per day. Buyer's credit = $\$80.00 \times 15 \text{ days} = \$1,200.00$.

32. Correct Answer: C — \$21,000

Worked Solution: Total commission = Sale Price $\times$ Rate = $\$350,000 \times 0.06 = \$21,000.00$.

33. Correct Answer: B — \$26,400

Worked Solution: Total commission = Sale Price $\times$ Rate = $\$480,000 \times 0.055 = \$26,400.00$.

34. Correct Answer: A — \$10,500

Worked Solution: Buyer's side share = Total Commission $\div 2 = \$21,000 \div 2 = \$10,500.00$.

35. Correct Answer: D — \$19,800

Worked Solution: Total commission = $\$600,000 \times 0.06 = \$36,000.00$. Listing side's share = $\$36,000 \times 0.55 = \$19,800.00$.

36. Correct Answer: B — \$11,340

Worked Solution: Buyer's side share = $\$36,000 \times 0.45 = \$16,200.00$. Agent's personal share = $\$16,200 \times 0.70 = \$11,340.00$.

37. Correct Answer: B — 5%

Worked Solution: Rate = Commission $\div$ Sale Price = $\$18,000 \div \$360,000 = 0.05 = 5\%$.

38. Correct Answer: A — \$400,000

Worked Solution: Sale Price = Commission $\div$ Rate = $\$24,000 \div 0.06 = \$400,000.00$.

39. Correct Answer: B — \$5,500

Worked Solution: Total commission = $\$275,000 \times 0.06 = \$16,500.00$. Each equal share = $\$16,500 \div 3 = \$5,500.00$.

40. Correct Answer: B — \$9,750

Worked Solution: Total commission = $\$520,000 \times 0.05 = \$26,000.00$. Listing side's share = $\$26,000 \times 0.50 = \$13,000.00$. Referral fee = $\$13,000 \times 0.25 = \$3,250.00$. Net to brokerage = $\$13,000 - \$3,250 = \$9,750.00$.

41. Correct Answer: D — 5 acres

Worked Solution: Acres = Total Square Feet $\div$ 43,560 = $217,800 \div 43,560 = 5.0$ acres.

42. Correct Answer: D — 3 acres

Worked Solution: Acres = Total Square Feet $\div$ 43,560 = $130,680 \div 43,560 = 3.0$ acres, exactly meeting the farmer's stated minimum.

43. Correct Answer: D — 10 acres

Worked Solution: Area = 660 ft $\times$ 660 ft = 435,600 square feet. Acres = $435,600 \div 43,560 = 10.0$ acres.

44. Correct Answer: A — \$300,000

Worked Solution: Total price = Price per Acre $\times$ Number of Acres = $\$150,000 \times 2 = \$300,000.00$.

45. Correct Answer: B — \$90,000

Worked Solution: Total value = Price per Acre $\times$ Number of Acres = $\$20,000 \times 4.5 = \$90,000.00$.

46. Correct Answer: B — 40 acres

Worked Solution: Area = 1,320 ft $\times$ 1,320 ft = 1,742,400 square feet. Acres = $1,742,400 \div 43,560 = 40.0$ acres.

47. Correct Answer: B — 2 acres

Worked Solution: Acres = Total Square Feet $\div$ 43,560 = 87,120 $\div$ 43,560 = 2.0 acres.

48. Correct Answer: A — 13,200 feet

Worked Solution: Feet = Miles $\times$ 5,280 = 2.5 $\times$ 5,280 = 13,200 feet.

49. Correct Answer: C — 2 miles

Worked Solution: Miles = Feet $\div$ 5,280 = 10,560 $\div$ 5,280 = 2.0 miles.

50. Correct Answer: C — 640 acres

Worked Solution: By definition, 1 section = 1 square mile = 640 acres. This is a fixed conversion worth memorizing directly rather than calculating.

51. Correct Answer: C — 160 acres

Worked Solution: Quarter section = 640 acres $\div$ 4 = 160 acres.

52. Correct Answer: A — 160 acres

Worked Solution: Half mile = 5,280 $\div$ 2 = 2,640 feet. Area = 2,640 ft $\times$ 2,640 ft = 6,969,600 square feet. Acres = 6,969,600 $\div$ 43,560 = 160.0 acres (matching the known quarter-section figure, since a half-mile-by-half-mile square is exactly one quarter section).

53. Correct Answer: C — 160 acres

Worked Solution: Quarter mile = 5,280 $\div$ 4 = 1,320 feet; full mile = 5,280 feet. Area = 1,320 ft $\times$ 5,280 ft = 6,969,600 square feet. Acres = 6,969,600 $\div$ 43,560 = 160.0 acres.

54. Correct Answer: A — 120

Worked Solution: GRM = Sale Price $\div$ Monthly Gross Rent = \$240,000 $\div$ \$2,000 = 120.

55. Correct Answer: C — \$180,000

Worked Solution: Estimated Value = GRM $\times$ Monthly Gross Rent = 100 $\times$ \$1,800 = \$180,000.00.

56. Correct Answer: C — 120

Worked Solution: GRM = Sale Price $\div$ Monthly Gross Rent = \$360,000 $\div$ \$3,000 = 120.

57. Correct Answer: B — \$275,000

Worked Solution: Estimated Value = GRM × Monthly Gross Rent = $110 \times \$2,500 = \$275,000.00$.

58. Correct Answer: D — 125

Worked Solution: GRM = Sale Price ÷ Monthly Gross Rent = $\$500,000 \div \$4,000 = 125$.

59. Correct Answer: C — \$336,000

Worked Solution: Comparable's GRM = $\$300,000 \div \$2,500 = 120$. Subject property's estimated value = $120 \times \$2,800 = \$336,000.00$.

60. Correct Answer: A — \$288,000

Worked Solution: Estimated Value = GRM × Monthly Gross Rent = $90 \times \$3,200 = \$288,000.00$.

61. Correct Answer: A — 8

Worked Solution: GIM = Sale Price ÷ Annual Gross Income = $\$400,000 \div \$50,000 = 8.0$.

62. Correct Answer: A — \$450,000

Worked Solution: Estimated Value = GIM × Annual Gross Income = $7.5 \times \$60,000 = \$450,000.00$.

63. Correct Answer: D — 6.5

Worked Solution: GIM = Sale Price ÷ Annual Gross Income = $\$650,000 \div \$100,000 = 6.5$.

64. Correct Answer: D — \$360,000

Worked Solution: Estimated Value = GIM × Annual Gross Income = $8 \times \$45,000 = \$360,000.00$.

65. Correct Answer: C — 7.5

Worked Solution: GIM = Sale Price ÷ Annual Gross Income = $\$900,000 \div \$120,000 = 7.5$.

66. Correct Answer: A — \$600,000

Worked Solution: Comparable's GIM = $\$550,000 \div \$88,000 = 6.25$. Subject property's estimated value = $6.25 \times \$96,000 = \$600,000.00$.

67. Correct Answer: D — \$468,000

Worked Solution: Estimated Value = GIM $\times$ Annual Gross Income = $9 \times \$52,000 = \$468,000.00$.

68. Correct Answer: A — \$75,000

Worked Solution: NOI = Gross Operating Income – Operating Expenses = $\$120,000 - \$45,000 = \$75,000.00$.

69. Correct Answer: C — \$1,000,000

Worked Solution: Value = NOI $\div$ Cap Rate = $\$80,000 \div 0.08 = \$1,000,000.00$.

70. Correct Answer: A — 9%

Worked Solution: Cap Rate = NOI $\div$ Value = $\$54,000 \div \$600,000 = 0.09 = 9\%$.

71. Correct Answer: C — \$120,000

Worked Solution: Operating Expenses = $\$200,000 \times 0.40 = \$80,000.00$. NOI = $\$200,000 - \$80,000 = \$120,000.00$.

72. Correct Answer: D — \$56,250

Worked Solution: NOI = Value $\times$ Cap Rate = $\$750,000 \times 0.075 = \$56,250.00$.

73. Correct Answer: A — 8%

Worked Solution: Cap Rate = NOI $\div$ Value = $\$96,000 \div \$1,200,000 = 0.08 = 8\%$.

74. Correct Answer: A — \$1,000,000

Worked Solution: NOI = $\$150,000 - \$62,000 = \$88,000.00$. Value = NOI $\div$ Cap Rate = $\$88,000 \div 0.088 = \$1,000,000.00$.

75. Correct Answer: C — \$51,000

Worked Solution: NOI = Value $\times$ Cap Rate = $\$850,000 \times 0.06 = \$51,000.00$.

76. Correct Answer: B — \$500,000

Worked Solution: $\text{Value} = \text{NOI} \div \text{Cap Rate} = \$45,000 \div 0.09 = \$500,000.00.$

77. Correct Answer: D — \$5,000

Worked Solution: $\text{Assessed Value} = \$500,000 \times 0.40 = \$200,000.00.$ $\text{Property Tax} = \text{Assessed Value} \times (\text{Mills} \div 1,000) = \$200,000 \times (25 \div 1,000) = \$200,000 \times 0.025 = \$5,000.00.$

78. Correct Answer: C — \$4,500

Worked Solution: $\text{Assessed Value} = \$375,000 \times 0.40 = \$150,000.00.$ $\text{Property Tax} = \$150,000 \times (30 \div 1,000) = \$150,000 \times 0.030 = \$4,500.00.$

79. Correct Answer: B — 20 mills

Worked Solution: $\text{Tax Rate (decimal)} = \$3,600 \div \$180,000 = 0.02.$ Converting to mills: $0.02 \times 1,000 = 20 \text{ mills}.$

80. Correct Answer: C — \$4,500

Worked Solution: $\text{Assessed Value} = \$625,000 \times 0.40 = \$250,000.00.$ $\text{Property Tax} = \$250,000 \times (18 \div 1,000) = \$250,000 \times 0.018 = \$4,500.00.$

81. Correct Answer: C — \$150,000

Worked Solution: $\text{Assessed Value} = \text{Tax} \div (\text{Mills} \div 1,000) = \$5,250 \div 0.035 = \$150,000.00.$

82. Correct Answer: D — \$7,200

Worked Solution: $\text{Assessed Value} = \$800,000 \times 0.40 = \$320,000.00.$ $\text{Property Tax} = \$320,000 \times (22.5 \div 1,000) = \$320,000 \times 0.0225 = \$7,200.00.$

83. Correct Answer: B — \$3,600

Worked Solution: $\text{Assessed Value} = \$225,000 \times 0.40 = \$90,000.00.$ $\text{Property Tax} = \$90,000 \times (40 \div 1,000) = \$90,000 \times 0.040 = \$3,600.00.$

84. Correct Answer: A — \$1,000 annual / \$83.33 monthly

Worked Solution: $\text{Annual PMI} = \text{Loan} \times \text{Annual Rate} = \$200,000 \times 0.005 = \$1,000.00.$ $\text{Monthly PMI} = \text{Annual PMI} \div 12 = \$1,000 \div 12 = \$83.33.$

85. Correct Answer: D — \$1,875 annual / \$156.25 monthly

Worked Solution: Annual PMI = Loan $\times$ Annual Rate = $\$250,000 \times 0.0075 = \$1,875.00$.
Monthly PMI = $\$1,875 \div 12 = \156.25 .

86. Correct Answer: C — \$1,800 annual / \$150 monthly

Worked Solution: Annual PMI = Loan $\times$ Annual Rate = $\$180,000 \times 0.01 = \$1,800.00$. Monthly PMI = $\$1,800 \div 12 = \150.00 .

87. Correct Answer: D — 0.5%

Worked Solution: Annual PMI = Monthly PMI $\times 12 = \$100 \times 12 = \$1,200.00$. Annual Rate = Annual PMI $\div$ Loan = $\$1,200 \div \$240,000 = 0.005 = 0.5\%$.

88. Correct Answer: C — \$270,000 loan / \$135 monthly

Worked Solution: Loan Amount = $\$300,000 \times (1 - 0.10) = \$300,000 \times 0.90 = \$270,000.00$.
Annual PMI = $\$270,000 \times 0.006 = \$1,620.00$. Monthly PMI = $\$1,620 \div 12 = \135.00 .

89. Correct Answer: D — \$1,870 annual / \$155.83 monthly

Worked Solution: Annual PMI = Loan $\times$ Annual Rate = $\$220,000 \times 0.0085 = \$1,870.00$.
Monthly PMI = $\$1,870 \div 12 = \155.83 .

90. Correct Answer: A — \$360,000 loan / \$165 monthly

Worked Solution: Loan Amount = $\$400,000 \times (1 - 0.10) = \$400,000 \times 0.90 = \$360,000.00$.
Annual PMI = $\$360,000 \times 0.0055 = \$1,980.00$. Monthly PMI = $\$1,980 \div 12 = \165.00 .

91. Correct Answer: B — 180 sq ft

Worked Solution: Area = Length $\times$ Width = $12 \text{ ft} \times 15 \text{ ft} = 180$ square feet.

92. Correct Answer: D — 20 sq yd

Worked Solution: Square Yards = Square Feet $\div 9 = 180 \div 9 = 20.0$ square yards.

93. Correct Answer: A — 200 feet

Worked Solution: Perimeter = $2 \times (\text{Length} + \text{Width}) = 2 \times (40 + 60) = 2 \times 100 = 200$ feet.

94. Correct Answer: B — 800 cubic feet

Worked Solution: Volume = Length $\times$ Width $\times$ Height = 10 ft $\times$ 10 ft $\times$ 8 ft = 800 cubic feet.

95. Correct Answer: C — 15,000 sq ft

Worked Solution: Area = Length $\times$ Width = 100 ft $\times$ 150 ft = 15,000 square feet.

96. Correct Answer: B — 0.34 acres

Worked Solution: Acres = Square Feet $\div$ 43,560 = 15,000 $\div$ 43,560 $\approx$ 0.34 acres.

97. Correct Answer: D — 20 feet

Worked Solution: Length = Area $\div$ Width = 300 $\div$ 15 = 20.0 feet.

98. Correct Answer: C — 260 feet

Worked Solution: Perimeter = 2 $\times$ (Length + Width) = 2 $\times$ (50 + 80) = 2 $\times$ 130 = 260 feet.

99. Correct Answer: C — 217,800 sq ft

Worked Solution: Square Feet = Acres $\times$ 43,560 = 5 $\times$ 43,560 = 217,800 square feet.

100. Correct Answer: C — 266.67 sq yd

Worked Solution: Square Yards = Square Feet $\div$ 9 = 2,400 $\div$ 9 $\approx$ 266.67 square yards.



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