

## Math Quiz

1. The selling price of a property is \$96,000. This can be financed if the buyer can put 10% down and pay a loan origination fee of 1.5%. How much cash must the buyer produce to complete this transaction?
  - a. \$10,080
  - b. \$10,869
  - c. \$11,040
  - d. \$11,084
  
2. The buyer of a \$125,000 home has paid \$2,000 as earnest money and has a loan commitment for 70% of the purchase price. What is the balance of the cash the buyer needs to complete the transaction?
  - a. \$3,500
  - b. \$35,500
  - c. \$37,000
  - d. \$37,500
  
3. A parcel of vacant land 80 feet wide and 200 feet deep was sold for \$200 per front foot. How much money would a salesperson receive for her 60% share in the 10% commission?
  - a. \$640
  - b. \$960
  - c. \$1,600
  - d. \$2,400
  
4. The listing and selling broker agree to split a 7% commission 50/50 on a \$95,900 sale. The listing broker gives the listing salesperson 30% of his commission and the selling broker gives the selling salesperson 35% of his commission. How much does the selling salesperson earn from the sale after deducting expenses of \$35?
  - a. \$1,139.78
  - b. \$1,174.78
  - c. \$971.95
  - d. \$1,183.88
  
5. The seller wants to net \$65,000 on the sale of his house after paying the broker a fee of 6%. How much must the gross selling price be?
  - a. \$69,149
  - b. \$68,093
  - c. \$67,035
  - d. \$66,091

6. The current market value of a property is \$255,000 and it is assessed at 35% of its current market value with an equalization factor of 1.25. What is the amount of real estate tax due if the tax rate is \$3.50 per \$100 of assessed value?
- a. \$2,756.25
  - b. \$3,445.31
  - c. \$3,904.70
  - d. \$4,880.26
7. If the quarterly interest at  $10\frac{1}{2}\%$  is \$3,150, what is the principal amount of the loan?
- a. \$30,000
  - b. \$60,000
  - c. \$90,000
  - d. \$120,000
8. A building was sold for \$115,000. Earnest money in the amount of \$15,000 was deposited in escrow, and the buyer obtained a new loan for the balance of the purchase price. The lender charged two discount points on the loan. What was the total amount of cash used by the buyer for this purchase?
- a. \$2,300
  - b. \$15,000
  - c. \$17,000
  - d. \$17,300
9. Last month's loan payment included \$412.50 interest on a \$60,000 loan balance. What is the annual rate of interest?
- a.  $7\frac{1}{2}\%$
  - b.  $7\frac{3}{4}\%$
  - c.  $8\frac{1}{4}\%$
  - d.  $8\frac{1}{2}\%$
10. How many acres are there in the property described as follows: the NW  $\frac{1}{4}$  of the SW  $\frac{1}{4}$  of the NE  $\frac{1}{4}$  of Section 16?
- a. 5 acres
  - b. 10 acres
  - c. 20 acres
  - d. 40 acres
11. An appraiser estimated the replacement cost of a building at \$560,000. It has an estimated economic life of 40 years and an estimated remaining life of 30 years. What is the current value of the building?
- a. \$140,000
  - b. \$392,000
  - c. \$420,000

- d. \$560,000
12. The effective gross income from an office building is \$73,500 and the annual operating expenses total \$52,300. If the owner expects to receive 11% return on his investment, what is the value of the building?
- a. \$125,800  
b. \$192,727  
c. \$475,454  
d. \$668,181
13. A parcel of vacant land has an assessed valuation of \$274,550. If the assessment is 85% of market value, what is the market value?
- a. \$315,732.50  
b. \$320,000.00  
c. \$323,000.00  
d. \$1,830,333.33
14. The seller-landlord has collected the September rent from all five tenants: two paying \$345 per month each and three paying \$425 per month each. Determine the prorated amount to be allowed the buyer when the sale closes on September 19<sup>th</sup>.
- a. \$720.50  
b. \$786.00  
c. \$1,244.50  
d. \$1,965.00
15. A lease provides that the tenant pays \$760 minimum rent per month plus 4% of gross sales in excess of \$150,000 per year. If the tenant paid a total rent of \$20,520 last year, what was the gross sales volume?
- a. \$150,000  
b. \$285,000  
c. \$435,000  
d. \$513,000
16. If a residence is valued at \$87,500 and its assessed ratio is 50% of market value, what are the annual taxes if the tax rate is \$7.80 per \$100 of assessed valuation?
- a. \$3,187.75  
b. \$3,412.50  
c. \$5,608.96  
d. \$6,825.00
17. A real estate licensee leased a building for 10 years at an annual rent of \$48,000. She will receive a commission of 7.5% for the first five years, 5% for the next three years, and 3.5% for the final years. What will her income be from this commission over the life of the lease?

- a. \$18,000
  - b. \$25,200
  - c. \$28,560
  - d. \$30,000
18. If the annual net income from certain commercial property is \$22,000 and the capitalization rate is 8%, what is the value of the property using the income approach?
- a. \$275,000
  - b. \$176,000
  - c. \$200,000
  - d. \$183,000
19. The taxes for 1999 are \$1,743.25 and have not been paid. If the sale is to be closed on August 12, 1999, what is the tax proration that will be charged to the seller based on a 360-day year?
- a. \$1,104.05
  - b. \$1,220.26
  - c. \$668.26
  - d. \$1,074.99
20. A house was listed for sale at \$84,900. The seller received \$71,424 after paying the broker a 7% commission. What was the selling price of the property?
- a. \$76,423.68
  - b. \$76,800.00
  - c. \$78,957.00
  - d. \$79,345.79

## Answers to Math Quiz

1. (b) (Step 1)  $\$96,000 \times 10\% = \$9,600$   
(Step 2)  $\$96,000 - \$9,600 = \$86,400$   
(Step 3)  $\$86,400 \times 1.5\% = \$1,269$   
(Step 4)  $\$1,269 + \$9,600 = \underline{\underline{\$10,869}}$
2. (b) (Step 1)  $\$125,000 \times 70\% = \$87,500$   
(Step 2)  $\$125,000 - \$87,500 = \$37,500$   
(Step 3)  $\$37,500 - \$2,000 = \underline{\underline{\$35,500}}$
3. (b) (Step 1)  $80 \times \$200 = \$16,000$   
(Step 2)  $\$16,000 \times 10\% = \$1,600$   
(Step 3)  $\$1,600 \times 60\% = \underline{\underline{\$960}}$
4. (a) (Step 1)  $\$95,900 \times 7\% = \$6,713$   
(Step 2)  $\$6,713 \times 50\% = \$3,356.50$   
(Step 3)  $\$3,356.50 \times 35\% = \$1,174.78$   
(Step 4)  $\$1,174.78 - \$35 = \underline{\underline{\$1,139.78}}$
5. (a) (Step 1)  $100\% - 6\% = 94\%$   
(Step 2)  $\$65,000 / 94\% = \underline{\underline{\$69,149}}$
6. (c) (Step 1)  $\$255,000 \times 35\% = \$89,250$   
(Step 2)  $\$89,250 \times 1.25 = \$111,562.50$   
(Step 3)  $\$111,562.50 / 100 = \$1,115.63$   
(Step 4)  $\$1,115.63 \times \$3.50 = \underline{\underline{\$3,904.70}}$
7. (d) (Step 1)  $\$3,150 \times 4 = \$12,600$   
(Step 2)  $\$12,600 / 10.5\% = \underline{\underline{\$120,000}}$
8. (c) (Step 1)  $\$115,000 - \$15,000 = \$100,000$   
(Step 2)  $\$100,000 \times 2\% = \$2,000$   
(Step 3)  $\$15,000 + \$2,000 = \underline{\underline{\$17,000}}$
9. (c) (Step 1)  $\$412.50 \times \$12 = \$4,950$   
(Step 2)  $\$4,950 / \$60,000 = \underline{\underline{8.25}}$
10. (b) (Step 1)  $\$640 / 4/4/4 = \underline{\underline{10}}$
11. (c) (Step 1)  $\$560,000 / 40 = \$14,000$   
(Step 2)  $\$14,000 \times 30 = \underline{\underline{\$420,000}}$
12. (b) (Step 1)  $\$73,500 - \$52,300 = \$21,200$   
(Step 2)  $\$21,200 / 11\% = \underline{\underline{\$192,727}}$
13. (c) (Step 1)  $\$274,550 / 85\% = \underline{\underline{\$323,000}}$

14. (a) (Step 1)  $\$345 \times 2 = \$690$   
(Step 2)  $\$425 \times 3 = \$1,275$   
(Step 3)  $\$690 + \$1,275 = \$1,965$   
(Step 4)  $\$1,965 / 30 = \$65.50$  daily  
(Step 5)  $11 \text{ days} \times \$65.50 = \underline{\underline{\$720.50}}$
15. (c) (Step 1)  $\$760 \text{ min rent} \times 12 = \$9,120$   
(Step 2)  $\$20,520 - \$9,120 = \$11,400$   
(Step 3)  $\$11,400 / 4\% = \$285,000$   
(Step 4)  $\$285,000 + \$150,000 = \underline{\underline{\$435,000}}$
16. (b) (Step 1)  $\$87,500 \times 50\% = \$43,750$   
(Step 2)  $\$43,750 / 100 = \$437.50$   
(Step 3)  $\$437.50 \times \$7.80 = \underline{\underline{\$3,412.50}}$
17. (c) (Step 1)  $\$48,000 \times 5 = \$240,000$   
(Step 2)  $\$240,000 \times 7.5\% = \$18,000$   
(Step 3)  $\$48,000 \times 3 = \$144,000$   
(Step 4)  $\$144,000 \times 5\% = \$7,200$   
(Step 5)  $\$48,000 \times 2 = \$96,000$   
(Step 6)  $\$96,000 \times 3.5\% = \$3,360$   
(Step 7)  $\$18,000 + \$7,200 + \$3,360 = \underline{\underline{\$28,560}}$
18. (a) (Step 1)  $\$22,000 / 8\% = \underline{\underline{\$275,000}}$
19. (d) (Step 1)  $\$1,743.25 / 360 = \$4.84236$  daily  
(Step 2)  $7 \text{ months} \times 30 \text{ days} (210) = 12 \text{ days} = 222$   
(Step 3)  $222 \times \$4.84236 = \underline{\underline{\$1,074.99}}$
20. (b) (Step 1)  $100\% - 7\% = 93\%$   
(Step 2)  $\$71,424 / 93\% = \underline{\underline{\$76,800}}$