

CHAPTER 13 – MATH QUESTIONS

1. A payment of \$100 per month plus interest at 12% on a \$10,000 loan (not amortized; Principal is constant, but Interest decreases each month.) What is the payment each month?

a. first month

b. second month

c. third month

2. What are the quarterly taxes if a property is assessed at 50 percent of market value of \$80,000, and the mill levy is 27.94.

3. Commission is determined by multiplying selling price times rate of commission. Find 6% commission on selling price of \$50,000.

4. Yearly taxes are \$421.20, what is monthly charge?

What is daily charge?

5. With the figures from question 4, above, if seller paid taxes in advance for the year starting July 1, and if the sale closed on September 10, what does buyer owe to seller (credit seller, debit buyer)?

6. If net income on property is \$1,200, and down payment was \$6,000, what is the percentage return on the down payment?

7. If net income on property is \$1,200, and purchase price is \$15,000, what is percentage return on purchase price?

8. Seller wants to net \$23,500 on the sale of his house, after paying the broker a 6% commission. For how much must he sell his house?
9. Assume the same facts, but also Seller has repair costs of \$1,450 and closing costs of \$325. For how much must he sell his house?
10. Assume a home sold for \$165,000, which was 12 percent less than its list price. If it had sold at its list price, how much commission would the real estate broker be entitled to if there were a 6% listing agreement?
11. According to the amortization tables, the monthly amortization for a \$1,000 loan at 11% interest over 30 years is \$9.53, and the monthly amortization for a \$1,000 loan at 10% interest over 15 years is \$10.75. If C borrowed \$130,000 at 11% for 30 years, and D borrowed \$130,000 at 10% interest for 15 years, what percentage would D's total interest payments be of C's total interest payments?

12. List price was set to leave the owner with \$90,000 after a 6% commission was deducted from the sales price. What was the list price?

13. L sold a note to M at a 14 percent discount. L received \$9,800. What was the amount due on the note?

14. The next monthly interest payment on a loan balance of \$17,835 is \$132.28. The interest rate on the loan is:

15. If a monthly interest payment was \$957.52 at 12 percent interest, what was the principal due at the time of payment?

16. A house purchased four years ago for \$50,000 has increased in value by 10% over each year since purchase. The house is now worth:

17. A property with a gross annual income of \$20,000 was purchased for \$120,000. The only expense is the 11% interest payment on a \$100,000 straight mortgage. What is the owner's percentage return on equity?

18. Property was sold on December 10. The seller, who was responsible for costs up to and including the day of closing, had paid the property tax of \$3,348 for the calendar year of the sale. On a closing statement, the taxes would be shown as:

19. A fully rented ten-unit apartment building has rents of \$500 per month. A 10% rent increase brings a 10% vacancy factor. What percentage does the gross income increase/decrease?

20. An investor purchased two lots for \$9,500 each. After subdividing them into three lots that sold for \$8,200 each, what was the investor's percentage profit on the cost?

21. L purchased a lot for \$9,000, and he listed the lot for sale at 40% more than he paid. Unable to find a buyer, he reduced his price by 30%. He found a buyer at the reduced price. After paying a 7% commission, what was the profit (or loss) on the sale?

22. A salesperson was to receive 30% of the office share of the commission for obtaining a listing. She listed a house for \$185,000 and it was sold for \$170,000 by another office with the selling office receiving 1/2 of the 6% percent commission. What was her listing commission?

23. According to an amortization schedule, a \$100,000 loan at 12% could be amortized with monthly payments of \$1,200.22 on a 15-year basis, or payments of \$1,028.63 on a 30-year basis. The 30-year loan results in total payments of what percentage of the 15-year total payments?

24. An income property sold for \$400,000 to an investor who planned on a 9% return on investment. An investor who wanted a 12 percent return would have paid how much for the property?

25. A broker listed a lot for \$23,000 with a 7% commission agreement. The broker brought in an offer of \$20,000. The owner agreed to accept the offer if the broker paid the delinquent property taxes of \$240. The broker agreed. What percentage commission did the broker actually earn on this sale?

26. You owe \$90,000 on a building that is worth \$120,000. Your net income is \$6,000, which would give you what percent return on equity?

27. Five condominiums were sold at \$165,000, \$195,000, \$225,000, \$265,600 and \$296,000. Together the units have annual property maintenance expenses of \$15,400, which the owners share on a pro rata basis, based on the cost of the units. What was the monthly assessment on the lowest-priced unit?

28. How much is the quarterly interest payment on a \$9,600 term loan at 8%?
29. A \$90,000 mortgage on a \$100,000 house has amortized monthly payments on a 13 1/2%, 30-year loan of \$1,030.88. Financing costs will increase the cost of the house by how many percent?
30. An 8% term loan of \$800 is paid off with an interest cost of \$42.60. How long did it take to pay off the loan?
31. The last month's interest on a 12% amortized loan was \$923.18. How much was the balance due?

32. A property that offers a 7.5% return on the listing price has a monthly net of \$810. At how much is the property listed?

33. D sold a lot for 30% more than she paid for it. She invested the entire sales price at 14% interest. The interest on this investment gave her \$820 per year. What did D originally pay for the lot?

34. An apartment has an annual gross income of \$64,000. The net income is 30% of the gross. An investor who wants an 11 percent return on the purchase price would pay no more than:

35. A 120' x 80' warehouse 15' high is listed for sale at \$55 per cubic yard. What is the list price per square foot?