

MATH REVIEW – TEST # 3

Revised - October 2018

1. A tenant's lease calls for a minimum base rent of \$3,500 per month plus additional rent of 5% of gross sales in excess of the base rent. If total sales were \$640,000, what was the tenant's total rent for the year?
2. The Sellers have paid \$750 for the Homeowners Association Dues for the current year. The house sold and the closing is held on June 15th that year. (Reminder: for test purposes use a 360 day year and 30 day month for all pro-rations). On the day of closing, what pro-rations should be made?
3. A property manager's compensation plan includes a base compensation of \$1,000 per month plus 5% of the collected rent. The complex has 10 units that rent for \$1,200 per month. 6 of the units were leased for the entire year and the rest of the units for half the year. 90% of the contracted rent was collected. What was the property manager's total compensation?
4. A buyer is purchasing a home for \$95,000 with an 80% LTV 1st mortgage loan. It will have a loan origination fee of 1 point and 3 discount points. The buyer's closing costs are as follows: closing fee of \$235, recording fees of \$55 and lenders title insurance policy of \$140. The buyers have deposited \$2,000 in earnest money with the listing firm. How much money will the buyer need to bring to the closing?
5. A property that was listed for \$550,000 at 5% with ABC Realty sold for \$500,000, and the buyers placed a \$5,000 earnest money deposit. The seller had a \$175,000 mortgage balance and the other closing costs were: closing fee \$250, title insurance \$750, recording fees \$150, these other closing costs were split equally between buyer and seller. What did the seller receive as their net proceeds at closing?
6. Which of the following would leave the seller with the most money?
 - a. Sales price \$250,000 commission rate 7% closing costs \$2,200
 - b. Sales price \$230,000 commission rate 6.5% closing costs \$2,000
 - c. Sales price \$220,000 commission rate 6% closing costs \$1,800
 - d. Sales price \$215,000 commission rate 5.5% closing costs \$1,500
7. Three investors purchased a property for \$260,000 as tenants in common. Investor "A" invested \$130,000, "B" invested \$78,000, and "C" invested \$52,000. Five years later the property is sold for \$580,000 and the proceeds were split on a pro-rata basis relative to their initial investment. How would the profits be allocated to each of the 3 investors?

8. A purchaser is buying a \$325,000 property and with a 20% down payment. The 30 year fixed rate loan at 3.75% will have constant monthly principal and interest payments of \$1,204.10. If closing is on the 15th of a 30 day month, and using a 360 day year, what will the buyer's interest prepayment be on the day of closing?

9. The units in a three unit condo complex sold as follows: A.) \$320,000, B.) \$330,000 and C.)\$350,000. The combined maintenance expenses for all three units were \$60,000 this year which will be allocated to the owners on a pro-rata basis based on sales price and collected as a monthly maintenance assessment over the next year. How much with the monthly maintenance assessment be for the least expensive unit?

ANSWER QUESTION #1:

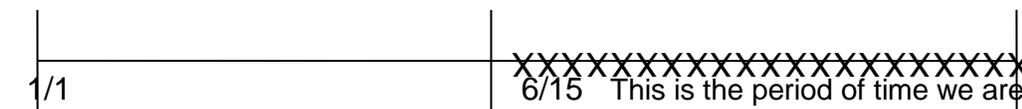
Base Rent		Percentage Rent	
\$3,500 X 12 = \$42,000	\$640,000	\$598,000	Base Rent \$42,000
	-\$42,000	X .05	Percentage Rent +\$29,900
	= \$598,000	= \$29,900	Total Rent = \$71,900

ANSWER QUESTION #2: This is a pre-paid proration problem

Step 1: Determine the monthly and daily figures.

$\$750 \div 12 = \$62.50/\text{month}$ $\$750 \div 360 = \$2.083/\text{day}$

Step 2: Determine how much time is left in the year.



End date	12 30	
- closing date	- 6 15	
= time left	= 6 15	(6 months and 15 days left in the year)

Debit buyer \$406.25, and Credit seller \$406.25
(Remember; the \$406.25 taken from buyer (debit) is the same \$406.25 given to seller (credit))

Step 3:

6 X \$62.50 =	\$375.00
15 X \$2.083 =	\$31.25
	\$406.25

ANSWER QUESTION #3:

$$\begin{aligned} \$ 1,200 \times 6 \text{ units} &= \$7,200 \times 12 \text{ months} = \$86,400 \\ \$ 1,200 \times 4 \text{ units} &= \$4,800 \times 6 \text{ months} = \underline{\$28,800} \\ &= \$115,200 \times 90\% = \$103,680 \times 5\% = \$5,184 \end{aligned}$$

$$\begin{aligned} \text{Base compensation } & \$1,000 \times 12 = \$12,000 \\ \text{Commissions on collected rent } & \underline{\$5,184} \\ \text{Total compensation} & = \$17,184 \end{aligned}$$

ANSWER QUESTION #4:

$$\begin{array}{r} \$95,000 \\ \times .20 \\ \hline \$19,000 \text{ down payment} \end{array}$$

\$95,000 Sales Price	\$19,000 down payment
<u>x.80 LTV</u>	\$ 3,040 points
76,000 Loan Amt.	<u>\$430 closing costs</u>
<u>x.04 points</u>	\$22,470 sub total
\$3,040	<u>- \$2,000 earnest money</u>
	= \$20,470 cash to close

ANSWER QUESTION #5: (Note: buyer's earnest money deposit of \$5,000 is a credit to buyer)

Sales Price	\$500,000
- Brokerage fee of 5%	- \$25,000
- Mortgage loan payoff	- \$175,000
- Seller's 1/2 of closing costs	<u>- \$575</u>
Seller's net proceeds	\$299,425

ANSWER QUESTION #6:

$$\begin{aligned} & \text{Sales price} - (\text{R.E Fee}) - (\text{Closing costs}) = \text{Seller's Net} \\ \text{a. } & \text{\$250,000} - \text{\$17,500} - \text{\$2,200} = \text{\$230,300 (largest net proceeds to seller)} \\ \text{b. } & \text{\$230,000} - \text{\$14,950} - \text{\$2,000} = \text{\$213,050} \\ \text{c. } & \text{\$220,000} - \text{\$13,200} - \text{\$1,800} = \text{\$205,000} \\ \text{d. } & \text{\$215,000} - \text{\$11,825} - \text{\$1,500} = \text{\$201,675} \end{aligned}$$

ANSWER QUESTION #7: (Note: it is the profits that are to be allocated, not the total proceeds)

$$\begin{aligned} & \$580,000 \text{ Sales price} \\ & \underline{-\$260,000 \text{ Original purchase price}} \\ & = \$320,000 \text{ Profit} \end{aligned}$$

So each of the investors would receive the following:

"A" owns 50% (\$130,000/\$260,000) so "A" receives \$160,000 or 50% of \$320,000

"B" owns 30% (\$78,000/\$260,000) so "B" receives \$96,000 or 30% of \$320,000

"C" owns 20% (\$52,000/\$260,000) so "C" receives \$64,000 or 20% of \$320,000

A likely mistake would be to allocate the sale price or proceeds instead of the profit.

ANSWER QUESTION #8:

At closing the lender will collect prepaid interest for the rest of the month including the day of closing. So in a 30 day month that would be 16 days of interest, (15th through 30th)

$$\begin{aligned} & \$325,000 \text{ Sale Price} \\ & \underline{\times .80} \text{ LTV} \\ & \$260,000 \text{ Loan Amount} \\ & \underline{\times .0375} \text{ Times 3.75\% interest rate} \\ & = \$9,750 \text{ Annual interest} \\ & \quad \div 360 \text{ divided by 360 to get daily interest or "per diem"} \\ & = \$27.083 \text{ Daily interest / "per diem"} \\ & \quad \underline{\times 16} \text{ Times the number of days left in month including the day of closing} \\ & = \$433.33 \text{ 16 days of pre-paid interest collected at closing} \end{aligned}$$

(Note: if your calculator only goes to two (2) decimal places, your answer could be off by a few cents, i.e. \$27.08 daily interest X 16 days would equal \$433.28)

ANSWER QUESTION #9:

Condo "A." is the least expensive unit and represents 32% of the total sales,

$$\begin{aligned} & \$320,000 \text{ Condo A} \\ & \$330,000 \text{ Condo B} \\ & \underline{+\$350,000} \text{ Condo C} \\ & =\$1,000,000 \quad \$320,000 \div \$1,000,000 = 32\% \\ & \text{so its' expense allocation is also 32\%.} \end{aligned}$$

$$\begin{aligned} & \$60,000 \text{ Annual expense to be assessed} \\ & \underline{\times .32} \text{ Pro-rata share of value} \\ & = \$19,200 \div 12 = \$1600 \text{ per monthly for the maintenance assessment} \end{aligned}$$