# State of Montana Property Management Pre-Licensing Course Math Test 

1. What is the annual rent paid on a unit with a rental agreement that calls for $3 \%$ of gross sales or $\$ 400 / \mathrm{mo}$, whichever is greater? Gross income for 2012 totaled $\$ 154,000$.
2. What is the annual and monthly rent on an office space $70^{\prime} \times 40^{\prime}$ at $\$ 8.25$ per square foot per year?
3. What is the monthly management fee on a space $50^{\prime} \times 40^{\prime}$ at $\$ 8$ per square foot, if the commission is $10 \%$ ?
4. A building is 5,000 square feet and the rent is $\$ 3,000 / \mathrm{mo}$. What is the annual rent per square foot?
5. The rent on a six-plex is $\$ 600$ per unit. What is the effective gross income (EGI) if you have two vacancies?
6. Find the NOI, EGI, and CASH FLOW for the property below:
(All figures are monthly)
50 units at $\$ 400$ each
$10 \%$ vacancy

Maintenance costs \$1,500
Utility costs \$500
Management fee 6\%
Property Tax \$1,320
Debt service $\quad \$ 8,860$
Form for Problem \#6
Income/Expense:
(Profit + Loss = Receipts/Disbursements)
Income:
Gross Possible Rental Income
Vacancy
Effective Gross Income

Expenses:

Maintenance

Utilities

Management Fee

Property Tax
$\qquad$

Total Expense

Net Operating Income (NOI)
Gross Potential Income (GPI)
$\qquad$
$\qquad$

Debt Service $\qquad$

Cash Flow $\qquad$
7. What is the monthly rent on the following commercial building if the annual rents are as follows?

| Floor 1 | $50^{\prime} \times 40^{\prime}$ | $\$ 5 / \mathrm{SF}$ |
| :--- | :--- | :--- |
| Floor 2 | $20^{\prime} \times 40^{\prime}$ | $\$ 6 / \mathrm{SF}$ |
| Floor 3 | $20^{\prime} \times 40^{\prime}$ | $\$ 7 / \mathrm{SF}$ |

8. What is the effective gross income (EGI) on an apartment building that has 60 units renting for $\$ 500$ per unit? The vacancy rate is $10 \%$.
9. What is the EGI on a building with 100 apartments renting at $\$ 400 /$ unit? At present, there are 25 vacant units.
10. The tenant's security deposit is $\$ 375$. What security deposit should be returned to the tenant, if after the final inspection and move-out the following were due:

Extra day rent \$17
Late fees $\$ 20$

Door repair \$25
Light bulbs \$5
Normal wear \$15
11. What is the annual rent on a building where the monthly rent is $\$ 0.10$ per square foot? The size of the rentable space is 4,500 square feet.
12. What is the prorated rent on an apartment if the rent is $\$ 600$ and the tenant moves in on the $20^{\text {th }}$ ? There are 30 days in the current month.
13. What is the effective gross rent per month over the term of a lease on a commercial five-year lease, if the first six months are rent-free and the annual rent is $\$ 10,000$ ?
14. What is the monthly and annual rent per square foot of an apartment building with 10 units that measure 800 square feet per unit? Each apartment rents for $\$ 650 / \mathrm{mo}$.
15. What is the monthly rent on a building that measures $50^{\prime} \times 75^{\prime}$ ? The annual rent is $\$ 18,400$.
16. What is the vacancy rate of a single family home that is rented for 11 out of 12 months?
17. What is the vacancy rate of an apartment building that has 10 units and during the year 3 units are vacant for 2 months each?
18. You are managing a 100 unit apartment complex and your cost of doing business to manage these units is $\$ 15,000$. What would your fee and markup have to be per unit to maintain a $10 \%$ profit?
19. Using problem 18, what commission should you charge to maintain this per unit cost if the gross possible income (GPI) is $\$ 250,000$ with a $10 \%$ vacancy rate?
20. You are managing a four-plex and each unit rents for $\$ 500 / \mathrm{mo}$. The operating cost for the year is $\$ 6,000$. What is the distribution you will send the owner at the end of the month?
21. You are managing a 50 unit apartment building. The current rent is $\$ 450$ per unit. There are no vacancies. The owner wants you to raise the rents $10 \%$. After raising the rent, five tenants move out. What is the difference in EGI after you raised the rents?
22. You are managing 600 units and want to make $23 \%$ profit. Direct expenses are $\$ 40,000$ and indirect expenses are $\$ 10,000$. What fee per unit must you charge?
23. A property manager is renting a single-family residence. He has debt service of $\$ 400 /$ month and annual taxes of $\$ 1200$. What would the property manager have to charge for monthly rent to make a $25 \%$ profit?
24. The rent is $\$ 350$ on a 70 unit complex. There is no vacancy. The property manager increases all rents by $10 \%$. After the increase, $10 \%$ of the units go vacant. What is the gross income before and after the rent increase? What is the increase/decrease in effective gross income after the increase?
25. If the Gross Potential Income (GPI) is $\$ 200,000$ and the Effective Gross Income is $\$ 188,000$, what is the monthly vacancy loss over the course of one year?

