

Math Test

1. What is the annual and monthly rent on an office space 70' x 40' at \$8.25 per square foot per year?

$$\begin{aligned}70 \times 40 &= 2,800 \text{ SF} \\2,800 \text{ SF} \times \$8.25 &= \mathbf{\$23,100 \text{ per year}} \\\$23,100 \div 12 &= \mathbf{\$1,925 \text{ per month}}\end{aligned}$$

2. A commercial building is 5,000 square feet and the rent is \$3,000/mo. What is the annual rent per square foot?

$$\begin{aligned}\$3,000 \times 12 &= \$36,000 \\\$36,000 \div 5,000 &= \mathbf{\$7.20}\end{aligned}$$

3. The rent on a six-plex is \$600 per unit. What is the monthly effective gross income (EGI) if you have two vacancies?

$$\begin{aligned}\$600 \times 6 &= \$3,600 \\\$3,600 - (2 \times \$600) &= \mathbf{\$2,400}\end{aligned}$$

4. What is the prorated rent on an apartment if the rent is \$600 and the tenant moves in on the 20th? There are 30 days in the current month.

$$\begin{aligned}\$600 \div 30 &= \$20 \text{ per day} \\\$20 \times 11 \text{ days} &= \mathbf{\$220}\end{aligned}$$

5. Find the EGI, NOI and CASH FLOW for the property below:

(All figures are monthly)

50 units at \$400 each - **GPI**

10% vacancy / 5 Units - **EGI**

Maintenance costs	\$1,500
Utility costs	\$500
Management fee	6% - \$1,080
Debt service	\$8,860

Income:

Gross Possible Rental Income	$50 \times \$400 = \$20,000$
Vacancy	$0.10 \times \$20,000 = \$2,000$ OR $5 \times \$400 = \$2,000$
Effective Gross Income	$\$20,000 - \$2,000 = \$18,000$

Expenses:

Maintenance	\$1,500
Utilities	\$500
Management Fee	$0.06 \times \$18,000 = \$1,080$

Total Expense \$3,080

Net Operating Income (NOI) \$14,920

Debt Service \$8,860 (Mortgage)

Cash Flow \$6,060

6. What is the monthly EGI on a building with 100 apartments renting at \$400/unit? At present, there are 25 vacant units.

$$\begin{aligned} 100 \times \$400 &= \$40,000 \\ \$400 \times 25 &= \$10,000 \\ \$40,000 - \$10,000 &= \mathbf{\$30,000} \end{aligned}$$

7. 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

$$17 + 20 + 25 + 5 = \$67$$
$$\$375 - \$67 = \mathbf{\$308}$$

8. What is the prorated rent on an apartment if the rent is \$1200 and the tenant moves in on the 10th? There are 30 days in the current month.

$$\$1200 \div 30 = \$40 \text{ per day}$$
$$\$40 \times 21 \text{ days} = \mathbf{\$840}$$

9. What is the monthly rent on a building that measures 50' x 75'? The annual rent is \$18,400.

$$\$18,400 \div 12 = \mathbf{\$1,533.33 \text{ per month}}$$

10. What is the vacancy rate of a single family home that is rented for 11 out of 12 months?

$$1 \div 12 = \mathbf{8.3\%}$$

11. 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 20% profit?

$$\begin{aligned} \$15,000 \div 100 &= \$150 \text{ per unit} \\ 150 \div 0.8 &= \mathbf{\$187.50 \text{ per unit}} \\ \$187.50 - \$150 &= \mathbf{\$37.50 \text{ markup}} \end{aligned}$$

12. You are managing a four-plex and each unit rents for \$500/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?

$$\begin{aligned} 4 \times \$500 &= \$2,000 \text{ per month} \\ \text{Operating Cost} &= \$6,000 \div 12 \text{ months} = \$500 \text{ per month} \\ \text{Owner Distribution} &= \$2,000 - \$500 = \mathbf{\$1,500} \end{aligned}$$

13. 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 moved out. What is the difference in the monthly EGI after you raised the rents?

$$\begin{aligned} \text{EGI before the rent increase: } &50 \times \$450 = \$22,500 \\ \text{Rent Increase: } & \$450 \times 10\% = \$45 = \$495/\text{mo} \\ \text{GPI: } & \$495 \times 50 = \$24,750 - \text{Vacancies } (\$495 \times 5 = \$2,475) = \mathbf{\$22,275} \\ \text{After increase EGI: } & \mathbf{\$225 \text{ less per month}} \end{aligned}$$

14. You are managing 500 units and want to make 20% profit. Direct expenses are \$40,000 and indirect expenses are \$10,000. What fee per unit must you charge?

$$\begin{aligned} \$40,000 + \$10,000 &= \$50,000 \\ \$50,000 \div 500 \text{ units} &= \$100.00 \text{ per unit} \\ \$100.00 \div .80 &= \mathbf{\$125 \text{ per unit}} \end{aligned}$$

15. 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?

GP Before Increase:

$$\$350 \times 70 = \mathbf{\$24,500}$$

GP After Increase:

$$\$350 \times 10\% = \mathbf{385}$$

$$\$385 \times 70 = \mathbf{\$26,950}$$

EGI After Increase:

$$70 \times 10\% = 7 \text{ Units}$$

$$63 \times 385 = \$24,255$$

$$\mathbf{\$<245>}$$

16. What is the definition of Cash Flow?

C) **Gross potential income minus vacancies, plus other income, minus expenses and debt service**