

Level II
2022 Review Exam / Answer Calculations

1. & 2. Using the following information determine a net operating income and capitalization rate for the property below.

Potential gross income	\$150,000	PGI	150,000
Vacancy and collection loss	7%	Less: V & C Loss - 7%	(10,500)
Operating expenses	\$60,000	EGI	139,500
Mortgage payment (P&I)	\$50,000	Less: Allowable Expenses	(60,000)
Property value	\$800,000	NOI	79,500

1. Net operating income =?

- | | |
|--------------|--------------------|
| a) \$150,000 | <u>c) \$79,500</u> |
| b) \$60,000 | d) \$139,500 |

2. Capitalization Rate =?

- | | |
|---------|----------------|
| a) 5.7% | <u>c) 9.9%</u> |
| b) 25% | d) 10.1% |

Use IRV to calculate Cap Rate, NOI divided by property value, $\$79,500 / \$800,000 = 9.9\%$

3. A duplex rents for \$800 per month on the lower floor and \$700 per month on the upper floor. It recently sold for \$162,000. What is the potential gross rent multiplier for this property ?

- | | |
|--------|---------------|
| a) 203 | <u>c) 108</u> |
| b) 9 | d) 100 |

Use VIF, calculate by dividing the value of \$162,000 by the total monthly income of \$1,500

4. An industrial office has a wall height of 14'. It is a par 6, wall type 3 (fire resistant) construction. What if any is the wall hgt. adjustment for this building ?

- | | |
|------------------|------------|
| a) -\$1.80 | c) \$3.60 |
| <u>b) \$2.64</u> | d) -\$3.60 |

The model wall height for industrial office is 12'. The wall height adjustment is $\$1.32 \times 2 = \2.64

5. A building has a net income of \$2,500 per month and it recently sold for \$380,000. What is its capitalization rate?

- | | |
|----------------|--------|
| a) 0.6% | c) 10% |
| <u>b) 7.9%</u> | d) 11% |

When using IRV it is based upon annual NOI. Take monthly income of \$2500 x 12 = NOI of \$30,000 divided by sales price of \$380,000 = cap rate of 7.9%.

6, 7 & 8.

Building has 40,000 square feet of total area and 5,000 square feet of common area. Market rent for similar bldgs. is \$20 per sq. ft. of net rentable area. Vacancy and collection loss is 6% and operating expenses are 35% of effective gross income.

6. What is the potential gross income?

- a) \$800,000 c) \$658,000
b) \$700,000 d) \$427,700

Net Leasable Area	35,000
Market Rent / Sq. Ft.	\$ 20.00
Total PGI	700000
Less: V & C of 6%	-42000

7. What is the effective gross income?

- a) \$800,000 c) \$658,000
b) \$700,000 d) \$427,700

EGI	658000
Less: Exp Ratio	35%
Allowable Expenses	230300
NOI	427700

8. What is the net operating income?

- a) \$800,000 c) \$658,000
b) \$700,000 d) \$427,700

9. A building has 8,000 square feet. 2,000 square feet is industrial office. The rest is heavy manufacturing. The walls are type 2 and the PAR is 11. The framing type is fireproof steel. What is the adjusted base rate for this building ?

- a) \$142.10 c) \$158.99
b) \$99.56 d) \$141.00

Calculation for this problem shown at the
end of the practice test.

10., 11., & 12. Determine a value for a subject property given the following information:

	Sale 1	Sale 2	Sale 3	Subject
Sale Price	\$95,000	\$89,500	\$82,000	
Date of Sale	24 months ago	18 months ago	18 months ago	
Time Adjustment	\$9,600	\$7,200	\$7,200	
Time Adjusted Sale Price	\$104,600	\$96,700	\$89,200	
Age	\$0	\$3,000	(\$3,000)	12 yrs.
Condition	\$4,500	\$0	\$4,500	Good
Fronts on Lake	(\$3,300)	\$0	\$0	Not waterfront
Floor area (Sq. Ft.)	(\$10,000)	(\$5,000)	\$0	1,500
Garage	\$0	\$900	\$900	Attached
Quality	\$0	\$0	\$4,100	Good
Net Adjustment	(\$8,800)	(\$1,100)	\$6,500	
Adjusted sale price	\$95,800	\$95,600	\$95,700	

Sale #1 sold two years ago for \$95,000. It is 12 years old, has 1,700 square ft., and is in average condition. It is located on the lake. It has a good quality attached garage. The home is also good quality.

Sale #2 sold 18 months ago for \$89,500. It is 14 years old and in good condition. It has 1,600 square feet and is not on the lake. It has a good quality detached garage. The home is also good quality.

Sale #3 sold 18 months ago for \$82,000. It is 10 years old and in average condition. It has 1,500 square feet and is not located on the lake. There is also an average quality detached garage. The home is also average quality.

The following elements are the contributing factors in the value of the properties:

Time: \$400 increase per month

Condition: \$4,500 between average and good

Floor area: \$50 per square foot

Quality: \$4,100 between average and good

Age: \$1,500 per year

Location: Lakefront is worth \$3,300

Garage: \$900 less for detached

10. What is the time adjustment for sale #3?

- | | |
|-------------------|--------------|
| a) <u>\$7,200</u> | c) \$96,000 |
| b) (\$1,100) | d) \$100,000 |

11. What is the net adjustment for sale #2?

- | | |
|---------------------|--------------|
| a) \$7,200 | c) \$96,000 |
| b) <u>(\$1,100)</u> | d) \$100,000 |

12. What is the indicated value of the subject property, rounded to the nearest \$1,000?

- | | |
|--------------|--------------------|
| a) \$7,200 | <u>c) \$96,000</u> |
| b) (\$1,100) | d) \$100,000 |

13. A parking lot is 20,000 square ft. It is asphalt 2" over 8" base. It is grade B-1 and is in Martin County. What is the adjusted base rate for this paving ?

- | | |
|-----------|------------------|
| a) \$1.60 | c) \$2.13 |
| b) \$1.85 | <u>d) \$3.01</u> |

The total Base Rate is $\$2.97 \times 115\%$ for B-1 =
 $\$3.42 \times \text{LCM of } 88\% = \text{Adj Base Rate of } \$3.01.$

14. A property has a NOI of \$522,000 and an EGI of \$680,000. It has an overall cap rate of 7.9 %. If the land to building ratio is 1:3, what is the value of the property ?

- | | |
|-----------------------|----------------|
| a) \$522,000 | c) \$8,607,590 |
| <u>b) \$6,607,600</u> | d) \$5,425,000 |

This is an IRV problem. Take NOI of
\$522,000 divided by Cap Rate of 7.9%

15. A fast food restaurant was built in 1992. It is in average condition. How much depreciation should it get?

- | | |
|---------------|--------|
| a) <u>75%</u> | c) 25% |
| b) 45% | d) 20% |

Appendix F to calculate effective age of 29
years. Go to Table F-8 to calculate depr
which is 75%.

16. Calculate the median using the following assessment ratios: .982, 1.06, 1.02, .993 and 1.03.

- | | |
|----------------|----------|
| <u>a) 1.02</u> | c) 0.993 |
| b) 1.000 | d) 0.982 |

Rank the ratios low to high, the middle ratio
is median which is 1.02

17 - 21. You are completing a ratio study with the following information. Using this information answer the following questions.

<u>Sales</u>	<u>A/V</u>	<u>Sale Price</u>	<u>Ratio</u>	<u>Median</u>	<u>Abs Dev</u>
Sale #1	\$103,200	\$88,500	1.166	0.984	0.182
Sale #2	\$99,500	\$99,100	1.004	0.984	0.02
Sale #3	\$127,400	\$134,000	0.951	0.984	0.033
Sale #4	\$118,100	\$120,000	0.984	0.984	0
Sale #5	\$112,900	\$127,500	0.885	0.984	0.099
Total	\$ 561,100	\$ 569,100			

Avg Abs Dev. = .067

17. Using the above information calculate the Median.

- a) .984
b) 1.012

- c) 0.92
d) 1.031

Calculated by ranking the 5 ratios from low to high. The middle ratio is Median of .984.

18. Using the above information calculate the Weighted Mean.

- a) 1.017
b) 0.952

- c) 1.019
d) 0.986

Calculated by taking the total AV all sales of \$561,100 divided by total sale price of all 5 sales of \$569,100.

19. Using the above information calculate the Mean.

- a) 0.952
b) 0.998

- c) 1.019
d) 0.986

Calculated by adding all five ratios together and dividing by the 5 sales.

20. Using the above information calculate the PRD.

- a) 0.952
b) 1.053

- c) 1.012
d) 0.986

Formula is the Mean divided by Weighted Mean. $.998 / .986 = 1.012$

21. Using the above information calculate the COD.

- a) 0.984
b) 6.809

- c) 8.32
d) 1.051

Formulas is avg abs dev / median x 100. $.067 / .984 \times 100 = 6.809$

22. & 23. - A hotel has 22,000 square feet and has 50 rooms. The hotel is a center hall configuration.

22. Using the above information what is the average unit size of each hotel room?

- a) 525 sq. ft.
b) 440 sq. ft.

- c) 300 sq. ft.
d) 485 sq. ft.

Hotel sq. ft. / # of rooms = avg. unit size.
 $22,000 / 50 = 440$

23. Using the above information what is the amount of unit finish adjustment?

- a) \$2.75
b) \$8.25

- c) \$5.25
d) \$6.00

Refer to unit cost adjustment schedule / motels / hotels center hall configuration.

24. You are pricing the first floor of a GCM General Retail store which does not have central air conditioning. What is the amount to be shown on the property record card for this adjustment ?

- a) - \$ 5.00
b) - \$ 2.05

- c) + \$4.10
d) - \$ 4.55

Refer to Schedule C. The HVAC rate is \$11.06, subtract the heat only adj. of \$6.06. Adj. to remove AC is - \$5.00.

25. What BPA adjustment factor you would apply to a 21 story building, in which the basement level is included in the story height of 21 ?

- a) 109
b) 100

- c) 112
d) 108

Go to Schedule B. The total story height after subtracting basement level is 20. BPA Factor is 108

Use the following information to answer the following questions #26, #27, & #28. A Burger Queen fast food restaurant was built in Wabash County in 1992. It contains 2,500 square feet, and is a Grade (B), in Good condition. It has a finished open basement of 1,600 square feet, used for storage. There is an asphalt parking lot (2" over 5") of 12,000 square feet, Graded C-1, in Average condition. The parking lot was constructed the same year as the building.

26. What is the replacement cost new of the basement?

- a) \$129,900
b) \$28,900

- c) \$65,210
d) \$38,960

See attached PRC

27. What is the total true tax improvement value of the fast food restaurant & paving?

- a) \$297,800
b) \$128,800

- c) \$352,400
d) \$147,800

See attached PRC

28. What is the true tax value of the asphalt paving?

- a) \$16,300
b) \$9,230

- c) \$5,600
d) \$6,040

See attached PRC

Problem #9 Answer:

**Industrial Office
Heavy Mfg.**

**2000 / 8000 = 25%
6000 / 8000 = 75%**

	<u>Industrial Office</u>	<u>Heavy Mfg.</u>
Base Rate	\$ 145.51	\$ 131.36
PAR Adjustment	\$ 9.81	\$ 10.59
Adjusted Rate	\$ 155.32	\$ 141.95
Fireproof Steel Adj.	\$ 12.81	\$ 13.99
Adjusted Base Rate	\$ 168.13	\$ 155.94
	25%	75%
Weighted Base Rate	\$ 42.03	\$ 116.96

Answer: Add the \$42.03 + \$116.96 = \$158.99