

Answer Guide No. 10
The Income Approach, Income and Expense Analysis, Direct Capitalization

This assignment is a Multiple Choice Assignment.

Marks: 1 mark per question.

1. Answer: 3
 The expectations of receiving a return on capital represents the time value of money with an appropriate adjustment for risk. A prudent investor ultimately seeks a total return greater than or equal to the amount invested. The investor's expected return consists of two components: full recovery of the amount invested and a reward for the assumption of risk. The full recovery of the amount invested must consider the time value of money.

2. Answer: 4
 Option (4) is false because the income approach can be used for many types of income-producing properties, not just apartments. Options (1), (2), and (3) are true.

3. Answer: 1
 Option (1) is false. The term *return of capital* refers to the recovery of invested capital; the term *return on capital* refers to the additional amount received as compensation for use of the investor's capital until it is recaptured. When an appraiser applies the capitalization rate to the subject property's income, the indicated value must represent a price that would allow the investor to earn a market rate of return on the capital invested along with the recapture of the capital. Thus, the capitalization rate applied represents *both* the rate of return on capital and the rate of return of capital.

4. Answer: 3

Potential Gross Rental Income	\$735,000	
+ Potential Parking Revenue		18,200
<u>+ Potential Laundry Revenue</u>		<u>4,600</u>
Total Potential Gross Income	\$757,800	
<u>Less Vacancy Allowance (2.9%)</u>	<u>(21,976)</u>	
Effective Gross Income	\$735,824	
<u>Less Operating Expenses</u>	<u>(303,000)</u>	
Net Operating Income		\$432,824

5. Answer: 4
 Overall Capitalization Rate = NOI/Sale Price

Net Operating Income Calculation

	Bell Towers	Schmidt Place
Potential Gross Rental Income	\$725,000	\$750,000
+ Potential Parking Revenue	17,000	16,200
+ <u>Potential Laundry Revenue</u>	<u>4,200</u>	<u>4,400</u>
Total Potential Gross Income	\$746,200	\$770,600
<u>Less Vacancy Allowance</u>	<u>(22,386)</u>	<u>(21,577)</u>
Effective Gross Income	\$723,814	\$749,023
<u>Less Operating Expenses</u>	<u>(298,000)</u>	<u>(308,000)</u>
Net Operating Income	\$425,814	\$441,023

Overall Capitalization Rate Calculation

Bell Towers: Overall Capitalization Rate = $\$425,814 / \$7,591,000 = 5.61\%$ rounded
 Schmidt Place: Overall Capitalization Rate = $\$441,023 / \$7,765,000 = 5.68\%$ rounded

6. Answer: 2
 Market Value = NOI/Capitalization Rate = $\$432,824 / 0.065 = \$6,615,400$ rounded to the nearest \$100.

7. Answer: 1
 There is an inverse relationship between the cap rate and market value. Therefore, if the cap rate increases, the market value decreases. We can confirm this result by doing the calculations.

If a cap rate of 5% results in a market value of \$7,000,000, that means the NOI for this property is \$350,000 (NOI = Market Value × Cap Rate).

$$\text{NOI} = \$7,000,000 \times 0.05 = \$350,000$$

Next, calculate the market value using this NOI and the more appropriate 5.5% cap rate.

$$\text{Market Value} = \$350,000 \div 0.055 = \$6,363,600, \text{ rounded.}$$

The market value has decreased from \$7,000,000 to \$6,363,600.

8. Answer: 2
- | | |
|--|-----------------|
| Potential Gross Income (35,000 sq. ft. × \$6.50) | \$227,500 |
| <u>Less Vacancy Allowance @ 5%</u> | <u>(11,375)</u> |
| Effective Gross Income | \$216,125 |
| <u>Less Management Expense @ 15%</u> | <u>(32,419)</u> |
| Net Operating Income | \$183,706 |

Note that depreciation is not used when calculating net operating income for appraisal purposes.

9. Answer: 1

Gross Income Multiplier = Sale Price ÷ Effective Gross Income

Sale Number 1: GIM = \$1,300,000 ÷ \$170,000 = 7.65

Sale Number 2: GIM = \$1,250,000 ÷ \$166,000 = 7.53

Sale Number 3: EGI = \$46,500 ÷ 0.30 = \$155,000

GIM = \$1,175,000 ÷ \$155,000 = 7.58

Average GIM = (7.65 + 7.53 + 7.58) ÷ 3 = 7.6, rounded (Note: averaging is not good appraisal practice; GIM is averaged for question purposes).

10. Answer: 4

Overall Capitalization Rate = Net Operating Income ÷ Sale Price

Sale Number 1: NOI = EGI - OE = \$170,000 - \$54,250 = \$115,750

OCR = \$115,750 ÷ \$1,300,000 = 8.90%

Sale Number 2: NOI = EGI - OE = \$166,000 - (\$166,000 × 0.32) = \$112,880

OCR = \$112,880 ÷ \$1,250,000 = 9.03%

Sale Number 3: NOI = EGI - OE = \$155,000 - \$46,500 = \$108,500

OCR = \$108,500 ÷ \$1,175,000 = 9.23%

Average OCR = (8.9% + 9.03% + 9.23%) ÷ 3 = 9.05% (Note: averaging is not good appraisal practice; OCR is averaged for question purposes).

11. Answer: 2

Demand for apartments is robust in the local area. Demand is probably exceeding supply, evident from the low vacancy and rent default rates relative to the national average.

12. Answer: 3

Contract rent is the actual rental income specified in a lease, and market rent is the rental income that a property would most probably command in the open market.

13. Answer: 4

A reconstructed operating statement represents an opinion of the probable future net operating income and is prepared for different purposes. A statement prepared for appraisal purposes would include management charges. Even if the business is owner operated, an allowance for management charges should be included for comparative analysis. The other options include items relevant to an investment/purchase decision.

14. Answer: 2

The valuation of fee simple interest in income-producing real estate is based on the market rent the property is capable of generating. Therefore market rent estimates are used in the income approach to value proposed projects with unleased space, properties with vacant space, and owner-occupied properties. Options (3) and (4) are incorrect because the rent for janitor-occupied space provided free is included in the reconstruction of the operating statement and estimated at market rents.

15. Answer: 4
All of the statements are correct. Deriving capitalization rates from comparable sales is the preferred technique when sufficient data on sales of similar, competitive properties is available. An appraiser needs data on each property's sale price, income, expenses, financing terms, market expectations, and market conditions at the time of sale. In addition, the appraiser must make sure the NOI and expenses of each comparable property is calculated and estimated in the same way that the NOI and expenses of the subject property is estimated.
16. Answer: 3
All other forms of income to real property, for example, income from services supplied to the tenants, such as secretarial service, switchboard service, antenna connections, storage, garage space, and income from coin-operated equipment and parking fees, are included in other income under potential gross income.
17. Answer: 1
Vacancy and collection loss is an allowance for reductions in potential gross income attributable to vacancies, tenant turnover, and nonpayment of rent or other income.
18. Answer: 4
Net operating income is found after total operating expenses are deducted from effective gross income but before mortgage debt service is deducted.
19. Answer: 4
Option (4) is false. Operating expense ratio (OER) is the ratio of total operating expenses to effective gross income (TOE/EGI).
20. Answer: 1
The effective gross income multiplier (EGIM) is the ratio between the sale price (or value) of a property and its effective gross income.

$$\$1,360,000 \div (\$180,000 - \$10,000) = 8$$

20 Total Marks