Question 1
L2R39TB-AC015-1512
LOS: LOS-8940
Lesson Reference: Lesson 2: Types of Commercial Real Estate and an Introduction to Valuation
Difficulty: medium
Which of the following is a primary driver of demand for multi-family housing?

- ○ Economic activity.
- ◉ Demographic factors.
- ○ Import and export volumes.

Rationale

✗ **Economic activity.**

Demographic factors, such as age and income level, will be primary drivers of demand for multi-family property. Economic activity will influence office, industrial/warehouse, and retail demand more than multi-family demand. Import/export volumes will drive warehouse demand but tend to have little effect on multi-family demand.

Rationale

✓ **Demographic factors.**

Demographic factors, such as age and income level, will be primary drivers of demand for multi-family property. Economic activity will influence office, industrial/warehouse, and retail demand more than multi-family demand. Import/export volumes will drive warehouse demand but tend to have little effect on multi-family demand.

Rationale

✗ **Import and export volumes.**

Demographic factors, such as age and income level, will be primary drivers of demand for multi-family property. Economic activity will influence office, industrial/warehouse, and retail demand more than multi-family demand. Import/export volumes will drive warehouse demand but tend to have little effect on multi-family demand.

Question 2

L2AI-TB0004-1412

LOS: LOS-8950

Lesson Reference: Lesson 2: Types of Commercial Real Estate and an Introduction to Valuation

Difficulty: medium

Three uses have been identified for a property. One is a power plant that would have a value after construction of £15 million. Development costs would be £11 million. The second use is residential apartments that would have a value after construction of £30 million with development costs of £20 million. The third use is a retail complex that will cost £30 million and have expected value on completion of £38 million. Which of these uses is the highest and best use?

- ○ Power plant.
- ◉ Apartments.
- ○ Retail complex.

Rationale

This Answer is Correct

The highest and best use of the land is the use that gives the highest implied land value, where implied land value is defined as value on completion minus cost to construct building. Hence:

Implied land value for power plant = £15 million – £11 million = £4 million.
Implied land value for apartments = £30 million – £20 million = £10 million.
Implied land value for retail complex = £38 million – £30 million = £8 million.

Hence, the highest and best use is for the residential apartments.

Question 3
L2R39TB-AC024-1512
LOS: LOS-8990
Lesson Reference: Lesson 4: The Cost Approach
Difficulty: medium

An appraiser intends to use a 4,160 square foot property that sold for $350,000 about 3 months ago to determine an average price for valuing a subject property. The comparison property is 5 years older than the subject property, in a rising market, in good condition, and in a secondary location. In order to determine the adjusted price per square foot (psf) the adjustments for valuation purposes are:

Age (in years)	1.67 percent	per year, assuming 75-year life, 20 percent land value
Condition	7.50 percent	from good (i.e., fair, poor)
Location	15.00 percent	from prime (i.e., secondary, unsuitable)
Months from sale	0.25 percent	per month when rising, –0.25 percent when falling

The appraiser will determine a price psf for this property *closest to*:

- ○ $79
- ○ $90
- ◉ $104

Rationale
✗ **$79**

The price psf of the benchmark property when sold was $84.13 ($350,000 / 4,160). The adjusted price psf to make it comparable is:

Price psf when sold	$84.13	
Age differential	0.0835	(–0.0167 × –5)
Condition	0.0000	
Location	0.1500	
Months from sale	0.0075	(0.0025 × 3)
Total adjustments	0.2401	
Adjusted psf	$104.41	[$84.13 × (1 + 0.2401)]

The first choice incorrectly considers the location adjustment a reduction to adjusted price psf. The second choice incorrectly considers the age differential adjustment a reduction to adjusted price psf.

Rationale

$90

The price psf of the benchmark property when sold was $84.13 ($350,000 / 4,160). The adjusted price psf to make it comparable is:

Price psf when sold	$84.13	
Age differential	0.0835	(–0.0167 × –5)
Condition	0.0000	
Location	0.1500	
Months from sale	0.0075	(0.0025 × 3)
Total adjustments	0.2401	
Adjusted psf	$104.41	[$84.13 × (1 + 0.2401)]

The first choice incorrectly considers the location adjustment a reduction to adjusted price psf. The second choice incorrectly considers the age differential adjustment a reduction to adjusted price psf.

Rationale

$104

The price psf of the benchmark property when sold was $84.13 ($350,000 / 4,160). The adjusted price psf to make it comparable is:

Price psf when sold	$84.13	
Age differential	0.0835	(–0.0167 × –5)
Condition	0.0000	
Location	0.1500	
Months from sale	0.0075	(0.0025 × 3)
Total adjustments	0.2401	
Adjusted psf	$104.41	[$84.13 × (1 + 0.2401)]

The first choice incorrectly considers the location adjustment a reduction to adjusted price psf. The second choice incorrectly considers the age differential adjustment a reduction to adjusted price psf.

Question 4
L2EQ-ITEMSET-PQ3808-1411
LOS: LOS-8990
Lesson Reference: Lesson 4: The Cost Approach

Use the following information to answer the next 2 questions:

An appraiser wants to value a property using the cost approach and gathers the following information:

- The value of land (based on sales prices of comparable pieces of land) equals $13 million.
- The building was constructed 15 years ago, but the appraiser estimates its effective age to be 18 years based on its current condition. It has a remaining economic life of 42 years.
- The building has a replacement cost of $40 million, excluding developer's profit of $2 million.
- The building's roof needs to be replaced. This would cost $450,000. The building also requires other minor repairs which would cost $200,000. All these expenses would increase the value of the building by at least $650,000.
- The poor design of the building leads to operating expenses being higher than they would otherwise be by $150,000.
- There is a design flaw with the building's elevators, which would cost $350,000 to fix. It is believed that fixing the problem would increase the value of the building by at least $350,000.
- Construction of a manufacturing plant nearby has reduced annual NOI for the building by $250,000 per year.
- The appraiser has estimated a cap rate of 11% to value the property.

i.
Incurable physical depreciation is *closest to*:

- (●) $12.405 million
- ( ) $13.250 million
- ( ) $13.055 million

Rationale

This Answer is Correct

Replacement cost of the building = $40,000,000 + $2,000,000 (developer's profit) = $42,000,000

Curable physical depreciation = $450,000 + $200,000 = $650,000

Ratio of effective age to total economic life = 18 / 60 = 30%

Incurable physical depreciation = ($42,000,000 – $650,000) × 30% = **$12,405,000**

ii.

The value of the property based on the cost approach is *closest to*:

- $40 million
- $38 million
- $39 million

Rationale

This Answer is Correct

Market value of the land

Replacement cost of the building		$40,000,000
Developer's profit		$2,000,000
		$42,000,000
Reduction for curable physical depreciation	$650,000	
Reduction for incurable physical depreciation	$12,405,000	
Reduction for curable functional obsolescence	$350,000	
Reduction for incurable functional obsolescence	$1,363,636	
Reduction for locational obsolescence	$2,272,727	
Estimated value from the cost approach		**$37,958,637**

Question 5
L2R39TB-AC035-1512
LOS: LOS-8920
Lesson Reference: Lesson 1: Real Estate: Basic Forms and Characteristics and Private Market Real Estate Equity Investments
Difficulty: medium
Non-owner occupied single-family housing could be *best* described as:

- (●) commercial property.
- ( ) non-commercial residential property.
- ( ) non-residential commercial property.

Rationale
✔ **commercial property.**
Single-family properties are classified as commercial if they are not owner occupied, but are still considered a residential use. The point to note here is that the classification residential and commercial may apply to the same property.

Rationale
✘ **non-commercial residential property.**
Single-family properties are classified as commercial if they are not owner occupied, but are still considered a residential use. The point to note here is that the classification residential and commercial may apply to the same property.

Rationale
✘ **non-residential commercial property.**
Single-family properties are classified as commercial if they are not owner occupied, but are still considered a residential use. The point to note here is that the classification residential and commercial may apply to the same property.

Question 6
L2AI-TBB202-1412
LOS: LOS-8970
Lesson Reference: Lesson 3: The Income Approach to Valuation
Difficulty: medium
A property has just been let at an NOI of $560,000 for the first year, which is expected to grow in line with capital value at a rate of 4% per year. The discount rate for the property is estimated to be 10%. Which of the following values is closest to the value of the property using the direct capitalization approach?

- $5,600,000.
- $9,333,333.
- $14,000,000.

Rationale

This Answer is Correct

The capitalization rate for the property is the discount rate minus the growth rate, which in this case is 10% – 4% = 6%.

The value of the property = NOI/Cap rate = $560,000 / 0.06 = $9,333,333.

Question 7
L2R39TB-AC037-1512
LOS: LOS-8940
Lesson Reference: Lesson 2: Types of Commercial Real Estate and an Introduction to Valuation
Difficulty: medium
Which commercial property classification would *most likely* require the greatest return on investment?

- An industrial warehouse with one tenant on a twenty-year lease.
- A doctor's office complex with thirty-five tenants; each tenant has signed a five-year lease and overall there is a high rate of lease renewal.
- A retail shopping center with five large anchor tenants and thirty smaller retail tenants; the smaller tenants generally sign two- to three-year leases.

Rationale

An industrial warehouse with one tenant on a twenty-year lease.
The retail shopping center will require more marketing to find tenants, and promotional effort on behalf of the shopping center owner. An investor would likely require a greater return on investment to compensate for their involvement. The office complex would require less effort, except possible management of the common areas and occasional marketing for new doctor tenants (which should be easy owing to their proximity to a medical complex).

Rationale

A doctor's office complex with thirty-five tenants; each tenant has signed a five-year lease and overall there is a high rate of lease renewal.
The retail shopping center will require more marketing to find tenants, and promotional effort on behalf of the shopping center owner. An investor would likely require a greater return on investment to compensate for their involvement. The office complex would require less effort, except possible management of the common areas and occasional marketing for new doctor tenants (which should be easy owing to their proximity to a medical complex).

Rationale

A retail shopping center with five large anchor tenants and thirty smaller retail tenants; the smaller tenants generally sign two- to three-year leases.
The retail shopping center will require more marketing to find tenants, and promotional effort on behalf of the shopping center owner. An investor would likely require a greater return on investment to compensate for their involvement. The office complex would require less effort, except possible management of the common areas and occasional marketing for new doctor tenants (which should be easy owing to their proximity to a medical complex).

Question 8
L2R39TB-AC022-1512
LOS: LOS-8980
Lesson Reference: Lesson 3: The Income Approach to Valuation
Difficulty: medium
The main difference between discounted cash flow (DCF) and direct capitalization methods of determining value of a real estate property could *best* be described as:

- (●) implicit growth rates in direct capitalization.
- ( ) implicit use of required return in DCF methods.
- ( ) explicit cash flow discounting in direct capitalization.

Rationale
✔ **implicit growth rates in direct capitalization.**
Growth rates are implied in the capitalization rate used for direct capitalization. They are explicit in NOI forecasts used for DCF methods.

Rationale
✘ **implicit use of required return in DCF methods.**
Growth rates are implied in the capitalization rate used for direct capitalization. They are explicit in NOI forecasts used for DCF methods.

Rationale
✘ **explicit cash flow discounting in direct capitalization.**
Growth rates are implied in the capitalization rate used for direct capitalization. They are explicit in NOI forecasts used for DCF methods.

Question 9
L2R39TB-AC036-1512
LOS: LOS-8920
Lesson Reference: Lesson 1: Real Estate: Basic Forms and Characteristics and Private Market Real Estate Equity Investments
Difficulty: medium
Fiesta San Antonio is a theme park with a retail shopping area, restaurant, and hotel. The theme park would *most likely* be classified as:

- retail.
- other.
- hospitality.

Rationale
retail.
Restaurants, universities and colleges, parking garages, recreational uses (e.g., theme parks), and hospitals fall into the *other* classification. Although uses from this classification may be combined with other categories, the theme park is still classified as other.

Rationale
other.
Restaurants, universities and colleges, parking garages, recreational uses (e.g., theme parks), and hospitals fall into the *other* classification. Although uses from this classification may be combined with other categories, the theme park is still classified as other.

Rationale
hospitality.
Restaurants, universities and colleges, parking garages, recreational uses (e.g., theme parks), and hospitals fall into the *other* classification. Although uses from this classification may be combined with other categories, the theme park is still classified as other.

Question 10
L2R39TB-AC020-1512
LOS: LOS-8970
Lesson Reference: Lesson 3: The Income Approach to Valuation
Difficulty: medium
A property is expected to earn $200,000 for the next three years, followed by increases of 2 percent per year thereafter. Investor-required returns have been about 15 percent based on market evidence. The property value will be *closest to*:

- $1.35 million.
- $1.49 million.
- $1.56 million.

Rationale
$1.35 million.

The value is calculated as follows:

$$\begin{aligned} \text{V}_0 &= \sum_{t=1}^{n} \frac{\text{NOI}_t}{(1+r)^t} + \frac{\frac{\text{NOI}_{n+1}}{r-g}}{(1+r)^n} \\ &= \frac{200{,}000}{(1+0.15)^1} + \frac{200{,}000}{(1+0.15)^2} + \frac{200{,}000}{(1+0.15)^3} + \frac{\frac{200{,}000(1.02)}{0.15-0.02}}{(1+0.15)^3} = \$1{,}488{,}440 \end{aligned}$$

Alternatively, the PV calculation on a calculator is:

$$\begin{aligned} \text{FV} &= (\$200{,}000 \times 1.02)/(0.15 - 0.02) = \$1{,}569{,}231 \\ \text{PMT} &= \$200{,}000;\ \text{I/Y} = 15;\ \text{N} = 3 \\ \text{PV} &= \$1{,}488{,}440 \end{aligned}$$

The first choice incorrectly uses the discount rate of 15 percent, not the terminal cap rate of 13 percent to compute the terminal value (which is the future value input in the PV calculation). The third choice incorrectly discounts the periodic cash flows using the terminal cap rate of 13 percent, not the discount rate of 15 percent (input I/Y in the PV calculation).

Rationale
$1.49 million.

The value is calculated as follows:

$$
\begin{aligned}
\mathrm{V}_0 &= \sum_{t=1}^{n} \frac{\mathrm{NOI}_t}{(1+r)^t} + \frac{\frac{\mathrm{NOI}_{n+1}}{r-g}}{(1+r)^n} \\
&= \frac{200{,}000}{(1+0.15)^1} + \frac{200{,}000}{(1+0.15)^2} + \frac{200{,}000}{(1+0.15)^3} + \frac{\frac{200{,}000(1.02)}{0.15-0.02}}{(1+0.15)^3} = \$1{,}488{,}440
\end{aligned}
$$

Alternatively, the PV calculation on a calculator is:

$$
\begin{aligned}
\mathrm{FV} &= (\$200{,}000 \times 1.02)/(0.15 - 0.02) = \$1{,}569{,}231 \\
\mathrm{PMT} &= \$200{,}000;\ \mathrm{I/Y} = 15;\ \mathrm{N} = 3 \\
\mathrm{PV} &= \$1{,}488{,}440
\end{aligned}
$$

The first choice incorrectly uses the discount rate of 15 percent, not the terminal cap rate of 13 percent to compute the terminal value (which is the future value input in the PV calculation). The third choice incorrectly discounts the periodic cash flows using the terminal cap rate of 13 percent, not the discount rate of 15 percent (input I/Y in the PV calculation).

Rationale

$1.56 million.

The value is calculated as follows:

$$
\begin{aligned}
\mathrm{V}_0 &= \sum_{t=1}^{n} \frac{\mathrm{NOI}_t}{(1+r)^t} + \frac{\frac{\mathrm{NOI}_{n+1}}{r-g}}{(1+r)^n} \\
&= \frac{200{,}000}{(1+0.15)^1} + \frac{200{,}000}{(1+0.15)^2} + \frac{200{,}000}{(1+0.15)^3} + \frac{\frac{200{,}000(1.02)}{0.15-0.02}}{(1+0.15)^3} = \$1{,}488{,}440
\end{aligned}
$$

Alternatively, the PV calculation on a calculator is:

$$
\begin{aligned}
\mathrm{FV} &= (\$200{,}000 \times 1.02)/(0.15 - 0.02) = \$1{,}569{,}231 \\
\mathrm{PMT} &= \$200{,}000;\ \mathrm{I/Y} = 15;\ \mathrm{N} = 3 \\
\mathrm{PV} &= \$1{,}488{,}440
\end{aligned}
$$

The first choice incorrectly uses the discount rate of 15 percent, not the terminal cap rate of 13 percent to compute the terminal value (which is the future value input in the PV calculation). The third choice incorrectly discounts the periodic cash flows using the terminal cap rate of 13 percent, not the discount rate of 15 percent (input I/Y in the PV calculation).

Question 11
L2R39TB-AC038-1512
LOS: LOS-8930
Lesson Reference: Lesson 1: Real Estate: Basic Forms and Characteristics and Private Market Real Estate Equity Investments
Difficulty: medium
Which of the following would *most likely* affect a pension fund's ability and willingness to invest in private equity real estate?

- ○ Capital appreciation.
- ○ Tax-sheltered income.
- ◉ Low correlation with other asset classes.

Rationale
✗ **Capital appreciation.**
Pension funds can enhance returns over corporate debt while reducing the risk of a portfolio due to low correlation of private equity real estate with debt and equity investments. Corporate equity investments have capital appreciation potential. Pension funds are not concerned with the taxability of income because they do not generally pay taxes.

Rationale
✗ **Tax-sheltered income.**
Pension funds can enhance returns over corporate debt while reducing the risk of a portfolio due to low correlation of private equity real estate with debt and equity investments. Corporate equity investments have capital appreciation potential. Pension funds are not concerned with the taxability of income because they do not generally pay taxes.

Rationale
✓ **Low correlation with other asset classes.**
Pension funds can enhance returns over corporate debt while reducing the risk of a portfolio due to low correlation of private equity real estate with debt and equity investments. Corporate equity investments have capital appreciation potential. Pension funds are not concerned with the taxability of income because they do not generally pay taxes.

Question 12
L2R39TB-AC009-1512
LOS: LOS-8920
Lesson Reference: Lesson 1: Real Estate: Basic Forms and Characteristics and Private Market Real Estate Equity Investments
Difficulty: medium
Which of the following is *most likely* to be considered commercial property?

- A feed lot.
- A four-family flat.
- A 60-acre tract of pine trees.

Rationale
A feed lot.
Based on its use, the four-family flat will be considered commercial property, even if the owner lives in one of the four units. The feed lot would most likely be considered farmland.

Rationale
A four-family flat.
Based on its use, the four-family flat will be considered commercial property, even if the owner lives in one of the four units. The feed lot would most likely be considered farmland.

Rationale
A 60-acre tract of pine trees.
Based on its use, the four-family flat will be considered commercial property, even if the owner lives in one of the four units. The feed lot would most likely be considered farmland.

Question 13
L2EQ-PQ3801-1410
LOS: LOS-8950
Lesson Reference: Lesson 2: Types of Commercial Real Estate and an Introduction to Valuation
Difficulty: medium

Consider the following information:

	Warehouse	Factory	Office
Value after construction	$4.25 million	$6.50 million	$5.80 million
Cost to construct building	$1.50 million	$4.15 million	$3.25 million

The highest and best use of the land is *most likely*:

- (●) Warehouse
- ( ) Factory
- ( ) Office

Rationale
This Answer is Correct

	Warehouse	Factory	Office
Value after construction	$4.25 million	$6.50 million	$5.80 million
Cost to construct building	$1.50 million	$4.15 million	$3.25 million
Implied land value	**$2.75 million**	$2.35 million	$2.55 million

The implied land value is highest ($2.75 million) with the construction of a warehouse.

Question 14
L2EQ-ITEMSET-PQ3804-1411
LOS: LOS-8970
Lesson Reference: Lesson 3: The Income Approach to Valuation

Use the following information to answer the next 2 questions:

A property that is up for sale requires some renovations to be competitive with comparable properties. All renovations will be completed by the seller at the seller's expense. If the property were already renovated, it would have annual NOI of $18 million, which would increase by 6% every year thereafter. However, because of the renovation NOI will only be $13 million next year. Investors require a rate of return of 11% from such properties.

i.
The value of the property if it is renovated would be *closest* to:

- ○ $164 million
- ○ $300 million
- ◉ $360 million

Rationale
This Answer is Correct

Cap rate = Discount rate – Growth rate = 0.11 – 0.06 = 0.05 or 5%

Value if renovated = $18 million / 0.05 = $360 million

ii.
The value of the property in its current state is *closest* to:

- ○ $314.50 million
- ○ $295.50 million
- ◉ $355.50 million

Rationale
This Answer is Correct

Present value of loss due to renovation = ($18m – $13m) / 1.11 = $4,504,504.505

Value of the property in current state = $360,000,000 – $4,504,504.505 = $355,495,495.5

Question 15
L2R39TB-AC032-1512
LOS: LOS-9030
Lesson Reference: Lesson 5: Due Diligence in Private Real Estate Investment, Indices and Private Market Real Estate Debt
Difficulty: medium
An investor purchases a $5 million office complex using $1 million of his own money. At the time of purchase, the property provides net operating income of $400,000 annually. The bank finances the remaining balance at 6.5 percent on a non-amortizing loan. Five years later, the investor sells the property for $5.5 million. If NOI drops 2.5 percent, the percent change in levered IRR as compared to unlevered IRR will be:

- smaller.
- greater.
- the same.

Rationale
smaller.
Using leverage generally provides a higher return but at a greater risk. A small drop in NOI may result in a larger decrease in return on equity.

$$\text{Levered IRR} = 20.64 \text{ percent } [\text{PV} = -1{,}000{,}000;\ \text{n} = 5;\ \text{PMT} = 140{,}000;\ \text{FV} = 1{,}500{,}000];\ \text{aftera 2.5 percent drop in NOI the PMT} = 130{,}000,\ \text{I} = 19.75,\ \text{which representsa 4 percent drop in IRR.}$$

$$\text{Unlevered IRR} = 9.65\%[\text{PV} = -5{,}000{,}000;\ \text{n} = 5;\ \text{PMT} = 400{,}000;\ \text{FV} = 5{,}500{,}000];\ \text{aftera 2.5 percent drop in NOI the PMT} = 390{,}000,\ \text{I} = 9.45,\ \text{which representsa 2 percent drop in IRR.}$$

Rationale
greater.
Using leverage generally provides a higher return but at a greater risk. A small drop in NOI may result in a larger decrease in return on equity.

$$\text{Levered IRR} = 20.64 \text{ percent } [\text{PV} = -1{,}000{,}000;\ \text{n} = 5;\ \text{PMT} = 140{,}000;\ \text{FV} = 1{,}500{,}000];\ \text{aftera 2.5 percent drop in NOI the PMT} = 130{,}000,\ \text{I} = 19.75,\ \text{which representsa 4 percent drop in IRR.}$$

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Rationale

the same.

Using leverage generally provides a higher return but at a greater risk. A small drop in NOI may result in a larger decrease in return on equity.

$$\text{Levered IRR} = 20.64 \text{ percent } [\text{PV} = -1{,}000{,}000;\ \text{n} = 5;\ \text{PMT} = 140{,}000;\ \text{FV} = 1{,}500{,}000];\ \text{aftera 2.5 percent drop in NOI the PMT} = 130{,}000,\ \text{I} = 19.75,\ \text{which representsa 4 percent drop in IRR.}$$

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Question 16
L2R39TB-AC040-1512
LOS: LOS-8930
Lesson Reference: Lesson 1: Real Estate: Basic Forms and Characteristics and Private Market Real Estate Equity Investments
Difficulty: medium
Which of the following types of risk would be *most likely* to affect a particular property rather than the real estate market in general?

- ○ Unexpected inflation.
- ○ Loan availability and costs.
- ◉ Demographic shifts toward a greater percentage of elderly.

Rationale
✗ **Unexpected inflation.**
Age and other factors affect the uses and, therefore, types of structures required in an area. A younger population may require more entertainment facilities, different types of restaurants, etc. Demographic changes will tend to affect some properties more than others. Unexpected inflation and loan availability and costs generally will impact the overall real estate market.

Rationale
✗ **Loan availability and costs.**
Age and other factors affect the uses and, therefore, types of structures required in an area. A younger population may require more entertainment facilities, different types of restaurants, etc. Demographic changes will tend to affect some properties more than others. Unexpected inflation and loan availability and costs generally will impact the overall real estate market.

Rationale
✓ **Demographic shifts toward a greater percentage of elderly.**
Age and other factors affect the uses and, therefore, types of structures required in an area. A younger population may require more entertainment facilities, different types of restaurants, etc. Demographic changes will tend to affect some properties more than others. Unexpected inflation and loan availability and costs generally will impact the overall real estate market.

Question 17
L2R39TB-AC033-1512
LOS: LOS-8910
Lesson Reference: Lesson 1: Real Estate: Basic Forms and Characteristics and Private Market Real Estate Equity Investments
Difficulty: medium
An office manager who expects commercial property values to increase and invests using money in her tax-deferred retirement account at her place of fulltime employment *most likely* would consider investing in:

- private debt, such as mortgage loans.
- public equity, such as real estate investment trusts (REITs).
- private equity, such as real estate limited partnerships (RELPs).

Rationale
private debt, such as mortgage loans.
The investor most likely would consider investing in public equity, including REITs and real estate operating companies. These are not management intensive, which would be good for a full-time employee at another company. Also, the tax advantages of private equity would not accrue to an investor using a tax-deferred retirement account. However, the investor could invest in private equity investments using tax-deferred retirement account assets under certain circumstances.

Rationale
public equity, such as real estate investment trusts (REITs).
The investor most likely would consider investing in public equity, including REITs and real estate operating companies. These are not management intensive, which would be good for a full-time employee at another company. Also, the tax advantages of private equity would not accrue to an investor using a tax-deferred retirement account. However, the investor could invest in private equity investments using tax-deferred retirement account assets under certain circumstances.

Rationale
private equity, such as real estate limited partnerships (RELPs).
The investor most likely would consider investing in public equity, including REITs and real estate operating companies. These are not management intensive, which would be good for a full-time employee at another company. Also, the tax advantages of private equity would not accrue to an investor using a tax-deferred retirement account. However, the investor could invest in private equity investments using tax-deferred retirement account assets under certain circumstances.

Question 18
L2R39TB-AC051-1512
LOS: LOS-9000
Lesson Reference: Lesson 5: Due Diligence in Private Real Estate Investment, Indices and Private Market Real Estate Debt
Difficulty: medium
Responsibility for the due diligence process *most likely* falls on the:

- seller.
- buyer.
- consultants.

Rationale
seller.
Although the seller may include consultants during the course of due diligence, it is the buyer who is responsible for the process.

Rationale
buyer.
Although the seller may include consultants during the course of due diligence, it is the buyer who is responsible for the process.

Rationale
consultants.
Although the seller may include consultants during the course of due diligence, it is the buyer who is responsible for the process.

Question 19
L2R39TB-AC012-1512
LOS: LOS-8930
Lesson Reference: Lesson 1: Real Estate: Basic Forms and Characteristics and Private Market Real Estate Equity Investments
Difficulty: medium
The proper order of least to most risky asset class is:

- bonds, stocks, real estate.
- real estate, bonds, stocks.
- bonds, real estate, stocks.

Rationale
bonds, stocks, real estate.
Real estate is riskier than bonds because return of full principal is not contractual, but less risky than stocks because the income stream is contractually assured.

Rationale
real estate, bonds, stocks.
Real estate is riskier than bonds because return of full principal is not contractual, but less risky than stocks because the income stream is contractually assured.

Rationale
bonds, real estate, stocks.
Real estate is riskier than bonds because return of full principal is not contractual, but less risky than stocks because the income stream is contractually assured.

Question 20

L2AI-TB0005-1412

LOS: LOS-8940

Lesson Reference: Lesson 2: Types of Commercial Real Estate and an Introduction to Valuation

Difficulty: medium

Which of the following values is closest to the gross rent equivalent per square foot of an apartment block that has net rent of $200 per square foot and operating expenses of $15 per square foot?

- $185.
- $200.
- $215.

Rationale

This Answer is Correct

On a gross lease, the owner pays the operating expense, whereas on a net lease the tenant pays. On the basis that expenses would be removed from the value of a net lease, it would be assumed that a gross lease would be higher by at least the amount of the expenses.

Question 21
L2R39TB-AC011-1512
LOS: LOS-8930
Lesson Reference: Lesson 1: Real Estate: Basic Forms and Characteristics and Private Market Real Estate Equity Investments
Difficulty: medium
An investor in a multi-family rental property has limited capital but wishes to protect herself against catastrophic losses due to natural disaster. To lessen her risk, this investor will *most likely*:

- enter contractual arrangements that shift catastrophic repair costs to tenants.
- diversify her holdings into several different geographic areas to avoid a large loss.
- enter contractual arrangements that limit her loss in exchange for a periodic payment.

Rationale
enter contractual arrangements that shift catastrophic repair costs to tenants.
The investor will most likely purchase insurance that limits her loss in exchange for a periodic payment. Contractual arrangements that shift costs to tenants would most likely be for smaller repairs, not natural disaster damage. Also, she has limited capital and likely will be unable to afford enough property to diversify away natural disasters.

Rationale
diversify her holdings into several different geographic areas to avoid a large loss.
The investor will most likely purchase insurance that limits her loss in exchange for a periodic payment. Contractual arrangements that shift costs to tenants would most likely be for smaller repairs, not natural disaster damage. Also, she has limited capital and likely will be unable to afford enough property to diversify away natural disasters.

Rationale
enter contractual arrangements that limit her loss in exchange for a periodic payment.
The investor will most likely purchase insurance that limits her loss in exchange for a periodic payment. Contractual arrangements that shift costs to tenants would most likely be for smaller repairs, not natural disaster damage. Also, she has limited capital and likely will be unable to afford enough property to diversify away natural disasters.

Question 22
L2R39TB-AC013-1512
LOS: LOS-8940
Lesson Reference: Lesson 2: Types of Commercial Real Estate and an Introduction to Valuation
Difficulty: medium
The net rent on the Faulkner building is $25 per square foot. Expenses generally cost the tenant an average of $10 per square foot. The equivalent gross rent will be *closest to*:

- ○ $2.50
- ○ $15.00
- ◉ $35.00

Rationale
✗ **$2.50**
Gross rent is what the landlord would charge to recoup all expenses and earn a profit. Since the tenant currently pays expenses under a net lease, the gross lease would cost $35 ($25 + $10).

Rationale
✗ **$15.00**
Gross rent is what the landlord would charge to recoup all expenses and earn a profit. Since the tenant currently pays expenses under a net lease, the gross lease would cost $35 ($25 + $10).

Rationale
✓ **$35.00**
Gross rent is what the landlord would charge to recoup all expenses and earn a profit. Since the tenant currently pays expenses under a net lease, the gross lease would cost $35 ($25 + $10).

Question 23
L2R39TB-AC017-1512
LOS: LOS-8950
Lesson Reference: Lesson 2: Types of Commercial Real Estate and an Introduction to Valuation
Difficulty: medium
A developer considers two potential uses for a property he owns with an existing, dilapidated structure that has no value in use. When completed, Project 1 will have a value of $25 million and a cost of $22.5 million. Project 2 will have a value of $15 million and a cost of $13.5 million. The developer's 10 percent construction management fee has been included in construction costs. The developer estimates teardown costs of $1.5 million for the existing structure and estimates the property will be worth $3 million as vacant land once teardown has occurred. The property's highest and best use will *most likely* be:

- Project 1.
- Project 2.
- vacant land.

Rationale
Project 1.

The implied values for the land if vacant and if the projects are completed are:

Vacant	Project 1	Project 2	
Completed value	$3.0	$25.0	$15.0
Less: Teardown	1.5	1.5	1.5
Less: Construction	0.0	22.5	13.5
Land value	$1.5	$1.0	$0.0

Note that the completed project value is just one component of the highest and best use for the land.

Rationale
Project 2.

The implied values for the land if vacant and if the projects are completed are:

Vacant	Project 1	Project 2	
Completed value	$3.0	$25.0	$15.0
Less: Teardown	1.5	1.5	1.5
Less: Construction	0.0	22.5	13.5
Land value	$1.5	$1.0	$0.0

Note that the completed project value is just one component of the highest and best use for the land.

Rationale

vacant land.

The implied values for the land if vacant and if the projects are completed are:

Vacant	Project 1	Project 2
Completed value	$3.0	$25.0	$15.0
Less: Teardown	1.5	1.5	1.5
Less: Construction	0.0	22.5	13.5
Land value	$1.5	$1.0	$0.0

Note that the completed project value is just one component of the highest and best use for the land.

Question 24
L2R39TB-AC031-1512
LOS: LOS-9030
Lesson Reference: Lesson 5: Due Diligence in Private Real Estate Investment, Indices and Private Market Real Estate Debt
Difficulty: medium
An investor purchases a $5 million office complex using $1 million of his own money. At the time of purchase, the property provides net operating income of $400,000 annually. The bank finances the remaining balance at 6.5 percent on a non-amortizing loan. Five years later, the investor sells the property for $5.5 million. The IRR based on the investor's equity contribution will be *closest to*:

- 10 percent.
- 21 percent.
- 44 percent.

Rationale

10 percent.

First subtract debt service of $260,000 (0.065 x $4,000,000) from NOI of $400,000 to get cash flow payment of $140,000. The cash-on-cash IRR using keystrokes on a TI-BAII Plus is:

$$\text{PV} = -1{,}000{,}000;\ \text{n} = 5;\ \text{PMT} = 140{,}000;\ \text{FV} = 1{,}500{,}000$$
$$(5{,}500{,}000 - 4{,}000{,}000)$$
$$\text{Solve for} \text{I/Y} = 20.64\ \text{percent}$$

The first choice is the unlevered IRR and the third choice is the levered IRR if the debt service is not subtracted.

Rationale

21 percent.

First subtract debt service of $260,000 (0.065 x $4,000,000) from NOI of $400,000 to get cash flow payment of $140,000. The cash-on-cash IRR using keystrokes on a TI-BAII Plus is:

$$\text{PV} = -1{,}000{,}000;\ \text{n} = 5;\ \text{PMT} = 140{,}000;\ \text{FV} = 1{,}500{,}000$$
$$(5{,}500{,}000 - 4{,}000{,}000)$$
$$\text{Solve for} \text{I/Y} = 20.64\ \text{percent}$$

The first choice is the unlevered IRR and the third choice is the levered IRR if the debt service is not subtracted.

Rationale

44 percent.

First subtract debt service of $260,000 (0.065 x $4,000,000) from NOI of $400,000 to get cash flow payment of $140,000. The cash-on-cash IRR using keystrokes on a TI-BAII Plus is:

$$\mathrm{PV} = -1{,}000{,}000;\ \mathrm{n} = 5;\ \mathrm{PMT} = 140{,}000;\ \mathrm{FV} = 1{,}500{,}000$$
$$(5{,}500{,}000 - 4{,}000{,}000)$$
$$\text{Solve for} \mathrm{I/Y} = 20.64\ \text{percent}$$

The first choice is the unlevered IRR and the third choice is the levered IRR if the debt service is not subtracted.

Question 25
L2R39TB-AC014-1512
LOS: LOS-8940
Lesson Reference: Lesson 2: Types of Commercial Real Estate and an Introduction to Valuation
Difficulty: medium
The Magic Store has a lease that specifies $35 per square foot plus 7.5 percent of sales over $500 psf. The rental rate at $800 psf in sales is *closest to*:

- $55.00
- $57.50
- $60.00

Rationale
$55.00
The rental rate will be $57.50 [$35 + 0.075 ($800 – $500)]. In this case, you will not be able to find the psf rate by simply multiplying the percentage of sales and the psf sales because the rental rate of $35 is below the natural breakpoint of $37.50 (0.075 x $500).

Rationale
$57.50
The rental rate will be $57.50 [$35 + 0.075 ($800 – $500)]. In this case, you will not be able to find the psf rate by simply multiplying the percentage of sales and the psf sales because the rental rate of $35 is below the natural breakpoint of $37.50 (0.075 x $500).

Rationale
$60.00
The rental rate will be $57.50 [$35 + 0.075 ($800 – $500)]. In this case, you will not be able to find the psf rate by simply multiplying the percentage of sales and the psf sales because the rental rate of $35 is below the natural breakpoint of $37.50 (0.075 x $500).

Question 26

L2AI-TB0001-1412

LOS: LOS-8910

Lesson Reference: Lesson 1: Real Estate: Basic Forms and Characteristics and Private Market Real Estate Equity Investments

Difficulty: medium

REITs are best characterized as which of the following basic forms of real estate investment?

- ○ Private equity.
- ◉ Public equity.
- ○ Public debt.

Rationale

This Answer is Correct

REITs are real estate investment trusts that are listed equity shares on a stock exchange, and as such are considered a form of public equity investment. Private equity refers to vehicles like limited partnerships, while public debt refers to traded real estate debt securities like mortgage-backed securities.

Question 27
L2R39TB-AC008-1512
LOS: LOS-8920
Lesson Reference: Lesson 1: Real Estate: Basic Forms and Characteristics and Private Market Real Estate Equity Investments
Difficulty: medium
Real estate professionals *most likely* have an advantage in negotiations on their own behalf with a potential buyer or seller because they have:

- ○ higher risk tolerance.
- ○ better financing options.
- ◉ asymmetric information.

Rationale
✗ **higher risk tolerance.**
Real estate professionals generally have better knowledge than most buyers and sellers regarding unique factors potentially affecting property values. This can create a disadvantage for the other party.

Rationale
✗ **better financing options.**
Real estate professionals generally have better knowledge than most buyers and sellers regarding unique factors potentially affecting property values. This can create a disadvantage for the other party.

Rationale
✓ **asymmetric information.**
Real estate professionals generally have better knowledge than most buyers and sellers regarding unique factors potentially affecting property values. This can create a disadvantage for the other party.

Question 28
L2AI-TBB203-1412
LOS: LOS-8980
Lesson Reference: Lesson 3: The Income Approach to Valuation
Difficulty: medium
Which of the following property appraisal methods is most suitable for a property with an expected growth rate in NOI that is different than the expected growth rate in capital value?

- (●) The DCF approach.
- ( ) The capitalization approach.
- ( ) Both the capitalization approach and DCF approach.

Rationale

This Answer is Correct
The DCF approach calculates each period's NOI and then discounts this alongside a terminal value for the property to arrive at a value for the property. It does not assume a constant equal growth in NOI and capital value.

Question 29
L2R39TB-AC042-1512
LOS: LOS-8930
Lesson Reference: Lesson 1: Real Estate: Basic Forms and Characteristics and Private Market Real Estate Equity Investments
Difficulty: medium
Property A is adversely affected by the economic conditions resulting from a military base closure. The impact on a real estate portfolio that includes Property A could *best* be lessened by:

- (●) diversification.
- ( ) purchasing insurance.
- ( ) strict contract clauses.

Rationale
✔ **diversification.**
This severity of this problem for a real estate portfolio can best be lessened by owning properties in many areas (i.e., diversification). Insurance will not be likely to cover this and lessees can still fail and create problems for the owner regardless of how "tightly" the contract has been drafted.

Rationale
✘ **purchasing insurance.**
This severity of this problem for a real estate portfolio can best be lessened by owning properties in many areas (i.e., diversification). Insurance will not be likely to cover this and lessees can still fail and create problems for the owner regardless of how "tightly" the contract has been drafted.

Rationale
✘ **strict contract clauses.**
This severity of this problem for a real estate portfolio can best be lessened by owning properties in many areas (i.e., diversification). Insurance will not be likely to cover this and lessees can still fail and create problems for the owner regardless of how "tightly" the contract has been drafted.

Question 30
L2R39TB-AC021-1512
LOS: LOS-8970
Lesson Reference: Lesson 3: The Income Approach to Valuation
Difficulty: medium
A property has $500,000 in annual rent over the next two years, at which time rents increase 2 percent. Current contract rents have a required return of 8 percent with additional rents subject to greater risk and a required return of 9 percent. If the property is to be sold at the end of the three-year period, its value using the layer method will be *closest to*:

- ○ $5.7 million.
- ◉ $6.3 million.
- ○ $11.0 million.

Rationale
✗ **$5.7 million.**

Valuation using the layer method is:

Bottom slice:	
Term rent	$500,000
PV perpetuity at 8 percent	÷ 0.08
Value	$6,250,000
Top slice:	
Additional 2%	$10,000
PV perpetuity at 9%	× 11.1
PV 2 years at 9%	× 0.8417
Value	$93,429
Total value	$6,343,429

The first choice is the value if the term rent is discounted to the present value plus a terminal value calculated at the time of the increase; it does not layer the increase in term rent. The third choice incorrectly discounts the entire rent ($510,000) as the top slice at the time of the increase, not just the layer of the increase ($10,000).

Rationale
✓ **$6.3 million.**

Valuation using the layer method is:

Bottom slice:	

Term rent	$500,000
PV perpetuity at 8 percent	÷ 0.08
Value	$6,250,000
Top slice:	
Additional 2%	$10,000
PV perpetuity at 9%	× 11.1
PV 2 years at 9%	× 0.8417
Value	$93,429
Total value	$6,343,429

The first choice is the value if the term rent is discounted to the present value plus a terminal value calculated at the time of the increase; it does not layer the increase in term rent. The third choice incorrectly discounts the entire rent ($510,000) as the top slice at the time of the increase, not just the layer of the increase ($10,000).

Rationale

$11.0 million.

Valuation using the layer method is:

Bottom slice:	
Term rent	$500,000
PV perpetuity at 8 percent	÷ 0.08
Value	$6,250,000
Top slice:	
Additional 2%	$10,000
PV perpetuity at 9%	× 11.1
PV 2 years at 9%	× 0.8417
Value	$93,429
Total value	$6,343,429

The first choice is the value if the term rent is discounted to the present value plus a terminal value calculated at the time of the increase; it does not layer the increase in term rent. The third choice incorrectly discounts the entire rent ($510,000) as the top slice at the time of the increase, not just the layer of the increase ($10,000).

Question 31
L2AI-TBX102-1502
LOS: LOS-9010
Lesson Reference: Lesson 5: Due Diligence in Private Real Estate Investment, Indices and Private Market Real Estate Debt
Difficulty: easy
Which of the following types of real estate index construction techniques is *most likely* to lead to an index that exhibits smoothed data?

- (●) Discounted cash flow.
- ( ) Repeat sales.
- ( ) Hedonic pricing.

Rationale

This Answer is Correct

Appraisal-based indices that use discounted cash flow methods suffer from a lag in updating information due to the infrequent nature of appraisals and the use of historical transaction data when appraisals do occur. Repeat sales and hedonic pricing techniques are transaction-based approaches and as such are less prone to smoothing bias.

Question 32
L2R39TB-AC016-1512
LOS: LOS-8950
Lesson Reference: Lesson 2: Types of Commercial Real Estate and an Introduction to Valuation
Difficulty: medium
An appraiser has knowledge of Individual A who is interested in farmland for sale that will become part of a larger, aggregated parcel she intends to sell to a mall developer. She would be willing to pay $250,000 for the land, but won't be ready to purchase any of the parcels for two years. Individual B has lost his farming lease and wishes to buy the same land immediately to get his crops in for the current growing season. He would be willing to pay $125,000 for the land if bank financing is approved. Two separate parcels of land similar in every way and with comparable locations just sold for $100,000. The appraiser will determine the market value of the land *closest to*:

- (●) $100,000
- ( ) $125,000
- ( ) $250,000

Rationale
$100,000
The appraiser will look at recent transactions of similar property to determine what a typical buyer would pay. Although the farmer would be willing to pay more, the market value is determined by the recent transactions, not what a buyer is willing to pay. The $250,000 is the investment value of the property specific to Individual A.

Rationale
$125,000
The appraiser will look at recent transactions of similar property to determine what a typical buyer would pay. Although the farmer would be willing to pay more, the market value is determined by the recent transactions, not what a buyer is willing to pay. The $250,000 is the investment value of the property specific to Individual A.

Rationale
$250,000
The appraiser will look at recent transactions of similar property to determine what a typical buyer would pay. Although the farmer would be willing to pay more, the market value is determined by the recent transactions, not what a buyer is willing to pay. The $250,000 is the investment value of the property specific to Individual A.

Question 33
L2R39TB-AC044-1512
LOS: LOS-8940
Lesson Reference: Lesson 2: Types of Commercial Real Estate and an Introduction to Valuation
Difficulty: medium
The owner of a multi-tenant office building wants to minimize unexpected changes in net operating income; he would *most likely* use:

- (●) net leases.
- ( ) gross leases.
- ( ) percentage leases.

Rationale
✔ **net leases.**
Operating expenses may fluctuate. Net leases require tenants to pay most or all of expenses, thus making the rental rate more stable to the owner and less stable to the tenant.

Rationale
✘ **gross leases.**
Operating expenses may fluctuate. Net leases require tenants to pay most or all of expenses, thus making the rental rate more stable to the owner and less stable to the tenant.

Rationale
✘ **percentage leases.**
Operating expenses may fluctuate. Net leases require tenants to pay most or all of expenses, thus making the rental rate more stable to the owner and less stable to the tenant.

Question 34
L2EQ-PQ3824-1410
LOS: LOS-8970
Lesson Reference: Lesson 3: The Income Approach to Valuation
Difficulty: medium

An analyst obtains the following information regarding three properties:

Property Description	Property A	Property B	Property C
Size (square meters)	12,000	4,000	8,000
Lease type	Net	Net	Gross
Expected LTV ratio	85%	75%	80%
Effective age	35	25	10
Remaining economic life	35	65	45
Rental income (at full occupancy)	$750,000	$700,000	$800,000
Other income	$45,000	$35,000	$250,000
Vacancy and collection loss	$75,000	$0	$80,000
Property management fee	$30,000	$25,000	$45,000
Other operating expenses	$0	$0	$350,000
Discount rate	11.50%	12.50%	11.00%
Growth rate	3.00%	3.50%	See Bullet # 2
Terminal cap rate			12.00%
Market value of land	$5,500,00	$2,000,000	$2,500,000
Replacement cost of building (including 2% developer's profit)	$14,500,000	$7,500,000	$6,000,000
Deterioration—Curable and incurable	$10,000,000	$3,750,000	$2,250,000
Obsolescence			
Functional	$800,000	$350,000	$135,000
Locational	$1,000,000	$500,000	$250,000
Economic	$1,000,000	$500,000	$150,000

Other information:

- The holding period for each property is expected to be 4 years.
- Property C is expected to have the same NOI for the holding period due to existing leases and a one-time 25% increase in Year 5 due to lease rollovers. No further growth is assumed after that.

Using the discounted cash flow method, the value of Property C is *closest to*:

- (●) $5.73 million.
- ( ) $8.13 million.
- ( ) $5.55 million.

Rationale

This Answer is Correct

We will first calculate the NOI for the 4 year holding period:

NOI = Rental income + Other income – Vacancy and collection loss – Property management fee – Other operating expenses

NOI = $800,000 + $250,000 – $80,000 – $45,000 – $350,000 = $575,000

Then we will calculate the terminal value at the end of Year 4:

NOI for Year 5 = $575,000 × 1.25 = $718,750

Terminal cap rate = 12%

Terminal value at the end of Year 4 = $718,750 / 0.12 = $5,989,583.333

N = 4; I/Y = 11; PMT = 575,000; FV = 5,989,583.333; CPT PV → PV = **$5,729,430.335**

Question 35
L2R39TB-AC041-1512
LOS: LOS-8930
Lesson Reference: Lesson 1: Real Estate: Basic Forms and Characteristics and Private Market Real Estate Equity Investments
Difficulty: medium
Management risk with respect to private equity commercial real estate investments refers to the aspect of managing:

- ○ the asset in a portfolio.
- ○ the real estate property.
- ◉ both the portfolio and the property.

Rationale
✗ **the asset in a portfolio.**
Management risk refers to the risks of managing the asset *and* the property.

Rationale
✗ **the real estate property.**
Management risk refers to the risks of managing the asset *and* the property.

Rationale
✓ **both the portfolio and the property.**
Management risk refers to the risks of managing the asset *and* the property.

Question 36
L2R39TB-AC027-1512
LOS: LOS-9010
Lesson Reference: Lesson 5: Due Diligence in Private Real Estate Investment, Indices and Private Market Real Estate Debt
Difficulty: medium
The value of appraisal-based indexes is that property values may be estimated when actual transactions are scarce. Which of the following aspects of holding period return (HPR) will be *most* affected by a lack of transactions?

- (●) Capital gain.
- ( ) Capital expenditures.
- ( ) Net operating income.

Rationale
✔ **Capital gain.**
It is difficult to determine value when there are few transactions. Therefore, it will be difficult to determine changes in value. Capex and NOI are reported by participants in the index.

Rationale
✘ **Capital expenditures.**
It is difficult to determine value when there are few transactions. Therefore, it will be difficult to determine changes in value. Capex and NOI are reported by participants in the index.

Rationale
✘ **Net operating income.**
It is difficult to determine value when there are few transactions. Therefore, it will be difficult to determine changes in value. Capex and NOI are reported by participants in the index.

Question 37
L2R39TB-AC049-1512
LOS: LOS-8970
Lesson Reference: Lesson 3: The Income Approach to Valuation
Difficulty: medium
An analyst evaluates two smaller mixed-use buildings in the downtown area; she determines that the buildings have combined rent of $4,050 per month with all four tenants on multi-year leases. Rents are scheduled to increase ten percent to $4,455 per month beginning year 2 and to $4,900.50 per month beginning year 3. The analyst estimates rents will increase by 5 percent annually thereafter. Vacancy losses are insignificant to this point but average about 5 percent for the area. The buildings are owner managed, however the analyst anticipates a management fee of 10 percent of effective gross income (EGI) to hire a professional manager. Operating expenses are 40 percent of EGI. Required returns on such properties are imputed at approximately 12 percent. The analyst calculates a value for these properties using the discounted cash flow method *closest to*:

- $235,000
- $327,000
- $359,000

Rationale

$235,000

The first step is to find NOI for years 1 through 4. Years 1 through 3 are given: a 10 percent increase, followed by a 5 percent increase in year 4. Because there is no additional income other than rents, subtracting a vacancy loss will provide EGI:

	Year 1	Year 2	Year 3	Year 4
Gross rents	48,600	53,460	58,806	61,746
Vacancy	(2,430)	(2,673)	(2,940)	(3,087)
EGI	46,170	50,787	55,866	58,659
Operating expense	(18,468)	(20,315)	(22,346)	(23,464)
Management fees	(4,617)	(5,079)	(5,587)	(5,866)
NOI	23,085	25,393	27,933	29,329

Required returns are estimated at 12 percent; this will be the discount rate used for cash flows in years 1 through 3. Year 4 cash flows will be capitalized at a terminal cap rate of 7 percent (12 percent – 5 percent) to find the terminal value at the end of year 3 (beginning of year 4). The terminal value will also be discounted using 12 percent for three periods:

$$
\begin{aligned}
\mathrm{V}_0 &= \sum_{t=1}^{n} \frac{\mathrm{NOI}_t}{(1+r)^t} + \frac{\frac{\mathrm{NOI}_{n+1}}{r-g}}{(1+r)^n} \\
&= \frac{23{,}085}{(1+0.12)^1} + \frac{25{,}393}{(1+0.12)^2} + \frac{27{,}933}{(1+0.12)^3} + \frac{\frac{29{,}329}{0.12-0.05}}{(1+0.12)^3} \\
&= 358{,}968
\end{aligned}
$$

$235,000 incorrectly calculates terminal value using the required return of 12 percent not the terminal cap rate of 7 percent. $327,000 incorrectly discounts the terminal value four periods instead of three.

Rationale

$327,000

The first step is to find NOI for years 1 through 4. Years 1 through 3 are given: a 10 percent increase, followed by a 5 percent increase in year 4. Because there is no additional income other than rents, subtracting a vacancy loss will provide EGI:

	Year 1	Year 2	Year 3	Year 4
Gross rents	48,600	53,460	58,806	61,746
Vacancy	(2,430)	(2,673)	(2,940)	(3,087)
EGI	46,170	50,787	55,866	58,659
Operating expense	(18,468)	(20,315)	(22,346)	(23,464)
Management fees	(4,617)	(5,079)	(5,587)	(5,866)
NOI	23,085	25,393	27,933	29,329

Required returns are estimated at 12 percent; this will be the discount rate used for cash flows in years 1 through 3. Year 4 cash flows will be capitalized at a terminal cap rate of 7 percent (12 percent – 5 percent) to find the terminal value at the end of year 3 (beginning of year 4). The terminal value will also be discounted using 12 percent for three periods:

$$
\begin{aligned}
\mathrm{V}_0 &= \sum_{t=1}^{n} \frac{\mathrm{NOI}_t}{(1+r)^t} + \frac{\frac{\mathrm{NOI}_{n+1}}{r-g}}{(1+r)^n} \\
&= \frac{23{,}085}{(1+0.12)^1} + \frac{25{,}393}{(1+0.12)^2} + \frac{27{,}933}{(1+0.12)^3} + \frac{\frac{29{,}329}{0.12-0.05}}{(1+0.12)^3} \\
&= 358{,}968
\end{aligned}
$$

$235,000 incorrectly calculates terminal value using the required return of 12 percent not the terminal cap rate of 7 percent. $327,000 incorrectly discounts the terminal value four periods instead of three.

Rationale

$359,000

The first step is to find NOI for years 1 through 4. Years 1 through 3 are given: a 10 percent increase, followed by a 5 percent increase in year 4. Because there is no additional income other than rents, subtracting a vacancy loss will provide EGI:

	Year 1	Year 2	Year 3	Year 4
Gross rents	48,600	53,460	58,806	61,746
Vacancy	(2,430)	(2,673)	(2,940)	(3,087)
EGI	46,170	50,787	55,866	58,659
Operating expense	(18,468)	(20,315)	(22,346)	(23,464)
Management fees	(4,617)	(5,079)	(5,587)	(5,866)
NOI	23,085	25,393	27,933	29,329

Required returns are estimated at 12 percent; this will be the discount rate used for cash flows in years 1 through 3. Year 4 cash flows will be capitalized at a terminal cap rate of 7 percent (12 percent – 5 percent) to find the terminal value at the end of year 3 (beginning of year 4). The terminal value will also be discounted using 12 percent for three periods:

$$
\begin{aligned}
\mathrm{V}_0 &= \sum_{t=1}^{n} \frac{\mathrm{NOI}_t}{(1+r)^t} + \frac{\frac{\mathrm{NOI}_{n+1}}{r-g}}{(1+r)^n} \\
&= \frac{23{,}085}{(1+0.12)^1} + \frac{25{,}393}{(1+0.12)^2} + \frac{27{,}933}{(1+0.12)^3} + \frac{\frac{29{,}329}{0.12-0.05}}{(1+0.12)^3} \\
&= 358{,}968
\end{aligned}
$$

$235,000 incorrectly calculates terminal value using the required return of 12 percent not the terminal cap rate of 7 percent. $327,000 incorrectly discounts the terminal value four periods instead of three.

Question 38
L2R39TB-AC046-1512
LOS: LOS-8940
Lesson Reference: Lesson 2: Types of Commercial Real Estate and an Introduction to Valuation
Difficulty: medium
The landlord of a multi-family property will *most likely* pay:

- ○ utilities.
- ◉ property taxes.
- ○ personal property insurance.

Rationale
✗ **utilities.**
Landlords typically pay property taxes on their buildings. Tenants typically pay utilities (where metered separately) and insurance on their personal property.

Rationale
✓ **property taxes.**
Landlords typically pay property taxes on their buildings. Tenants typically pay utilities (where metered separately) and insurance on their personal property.

Rationale
✗ **personal property insurance.**
Landlords typically pay property taxes on their buildings. Tenants typically pay utilities (where metered separately) and insurance on their personal property.

Question 39
L2R39TB-ITEMSET-AC004-1512
LOS: LOS-8990
LOS: LOS-9030
LOS: LOS-8940
Lesson Reference: Lesson 2: Types of Commercial Real Estate and an Introduction to Valuation
Difficulty: medium

Use the following information to answer the next 3 questions:

Remy Sinatra considers purchasing a multi-tenant office building, a smaller retail shopping mall, or a warehouse for inclusion in his portfolio of income-producing properties. There is a relatively active market for office buildings in his area, so Sinatra decides to use the market value approach as his initial estimate of value for the office building.

Sinatra's assistant looks at a commercial property marketing site to find comparable properties purchased over the last year; his initial workup is detailed in Exhibit 1. The assistant further examines the market-based data and prepares Exhibit 2 showing several market value adjustments appropriate for office buildings.

Sinatra makes an offer for $2.0 million for the office building based on NOI of $200,000 and an NOI multiple of 10, which is common in that area. Based on Sinatra's approved financing, he will finance the property with a non-amortizing loan at the maximum loan to value (LTV) of 70 percent at 5.5 percent interest, payable annually, with a balloon payment due in 5 years. The market has recently rebounded and Sinatra would like to capitalize on potential appreciation in the real estate market. He plans to hold the property for five years, hopes to resell it at a target price of $2.25 million and payoff the balloon note when it comes due.

Exhibit 1: Office Building – Market Value Analysis

	Subject	Comparables				
	Property	1	2	3	4	5
Sales price	TBD	$1,800,000	$1,925,000	$1,750,000	$2,250,000	$1,350,000
Square footage	13,500	11,600	12,750	12,900	14,516	9,450
Age (in years)	15	10	15	20	25	5
Condition	0	(1)	(2)	0	0	(1)
Location	0	0	(1)	(1)	0	(1)
Months from sale	N/A	(4)	(7)	(2)	(3)	(5)

Exhibit 2: Office Building – Adjustments for Market Value Analysis

Age (in years)	1.67 percent per year, assuming 75-year life, 20 percent land value
Condition	7.50 percent from good (i.e., fair, poor)
Location	15.00 percent from prime (i.e., secondary, unsuitable)
Months from sale	0.25 percent per month when rising, negative when falling

i.

In comparison to the market value estimated using the sales comparison approach, Sinatra's offer is *most likely*:

- ○ higher, by more than ten percent.
- ◉ lower, by more than ten percent.
- ○ within a ten percent range.

Rationale

This Answer is Correct

First, market value can be established by applying the assumptions in Exhibit 2 to data from the comparables (benchmark properties) in Exhibit 1:

	Subject	Comparables				
	Property	1	2	3	4	5
Sales price	TBD	$1,800,000	$1,925,000	$1,750,000	$2,250,000	$1,350,000
Square footage	13,500	11,600	12,750	12,900	14,516	9,450
Age (in years)	15	10	15	20	25	5
Condition	0	(1)	(2)	0	0	(1)
Location	0	0	(1)	(1)	0	(1)
Months from sale	N/A	(4)	(7)	(2)	(3)	(5)
Price psf		$155.17	$150.98	$135.66	$155.00	$142.86
Adjustments:						
Age		–0.0835	0.0000	0.0835	0.1670	–0.1670
Condition		0.0750	0.1500	0.0000	0.0000	0.0750
Location		0.0000	0.1500	0.1500	0.0000	0.1500
Months from sale		0.0100	0.0175	0.0050	0.0075	0.0125
Total adjustments		0.0015	0.3175	0.2385	0.1745	0.0705
Adjusted price psf		$155.40	$198.92	$168.01	$182.05	$152.93
Avg. adjusted price	$171.46					
Appraised value	$2,314,745	(13,000 × $171.46)				

The market value estimated by the sales comparison approach is $2,314,745; Sinatra's offer of $2.0 million is more than 10 percent lower. If the *unadjusted price psf* had been used, the market value would have been approximately $2 million. If the adjustments were made incorrectly (the decreases were added and the increases were deducted) the average adjusted psf would have been significantly lower and Sinatra's offer would have been more than ten percent higher than market value.

Rationale

This Answer is Correct

First, market value can be established by applying the assumptions in Exhibit 2 to data from the comparables (benchmark properties) in Exhibit 1:

	Subject	Comparables				
	Property	1	2	3	4	5
Sales price	TBD	$1,800,000	$1,925,000	$1,750,000	$2,250,000	$1,350,000
Square footage	13,500	11,600	12,750	12,900	14,516	9,450
Age (in years)	15	10	15	20	25	5
Condition	0	(1)	(2)	0	0	(1)
Location	0	0	(1)	(1)	0	(1)
Months from sale	N/A	(4)	(7)	(2)	(3)	(5)
Price psf		$155.17	$150.98	$135.66	$155.00	$142.86
Adjustments:						
Age		–0.0835	0.0000	0.0835	0.1670	–0.1670
Condition		0.0750	0.1500	0.0000	0.0000	0.0750
Location		0.0000	0.1500	0.1500	0.0000	0.1500
Months from sale		0.0100	0.0175	0.0050	0.0075	0.0125
Total adjustments		0.0015	0.3175	0.2385	0.1745	0.0705
Adjusted price psf		$155.40	$198.92	$168.01	$182.05	$152.93
Avg. adjusted price	$171.46					
Appraised value	$2,314,745	(13,000 × $171.46)				

The market value estimated by the sales comparison approach is $2,314,745; Sinatra's offer of $2.0 million is more than 10 percent lower. If the *unadjusted price psf* had been used, the market value would have been approximately $2 million. If the adjustments were made incorrectly (the decreases were added and the increases were deducted) the average adjusted psf would have been significantly lower and Sinatra's offer would have been more than ten percent higher than market value.

Rationale

This Answer is Correct

First, market value can be established by applying the assumptions in Exhibit 2 to data from the comparables (benchmark properties) in Exhibit 1:

	Subject	Comparables

	Subject	Comparables				
	Property	1	2	3	4	5
Sales price	TBD	$1,800,000	$1,925,000	$1,750,000	$2,250,000	$1,350,000
Square footage	13,500	11,600	12,750	12,900	14,516	9,450
Age (in years)	15	10	15	20	25	5
Condition	0	(1)	(2)	0	0	(1)
Location	0	0	(1)	(1)	0	(1)
Months from sale	N/A	(4)	(7)	(2)	(3)	(5)
Price psf		$155.17	$150.98	$135.66	$155.00	$142.86
Adjustments:						
Age		–0.0835	0.0000	0.0835	0.1670	–0.1670
Condition		0.0750	0.1500	0.0000	0.0000	0.0750
Location		0.0000	0.1500	0.1500	0.0000	0.1500
Months from sale		0.0100	0.0175	0.0050	0.0075	0.0125
Total adjustments		0.0015	0.3175	0.2385	0.1745	0.0705
Adjusted price psf		$155.40	$198.92	$168.01	$182.05	$152.93
Avg. adjusted price	$171.46					
Appraised value	$2,314,745	(13,000 × $171.46)				

The market value estimated by the sales comparison approach is $2,314,745; Sinatra's offer of $2.0 million is more than 10 percent lower. If the *unadjusted price psf* had been used, the market value would have been approximately $2 million. If the adjustments were made incorrectly (the decreases were added and the increases were deducted) the average adjusted psf would have been significantly lower and Sinatra's offer would have been more than ten percent higher than market value.

ii.

At the end of his expected holding period, Sinatra hopes to earn a cash-on-cash IRR *closest to*:

- (●) 26 percent.
- ( ) 37 percent.
- ( ) 44 percent.

Rationale

This Answer is Incorrect

First subtract debt service of $77,000 (0.055 × 0.70 × $2,000,000) from NOI of $200,000 to get cash flow of $123,000. At the end of his planned five-year holding period, Sinatra has a target sales price of $2.25 million; the anticipated future value is the sales price less the outstanding loan amount. The cash-on-cash IRR using keystrokes on a TI-BAII Plus is:

PV = –600,000 (based on 70 percent LTV, therefore 30 percent initial equity); *n* = 5; PMT = $123,000; FV = 850,000 (2,250,000 –1,400,000)
Solve for *i* = 25.5 percent

Choice B incorrectly uses the full NOI as the payment in the IRR calculation. Choice C incorrectly uses the full sales price of $2,250,000 as the FV in the IRR calculation.

Rationale

This Answer is Incorrect

First subtract debt service of $77,000 (0.055 × 0.70 × $2,000,000) from NOI of $200,000 to get cash flow of $123,000. At the end of his planned five-year holding period, Sinatra has a target sales price of $2.25 million; the anticipated future value is the sales price less the outstanding loan amount. The cash-on-cash IRR using keystrokes on a TI-BAII Plus is:

PV = –600,000 (based on 70 percent LTV, therefore 30 percent initial equity); *n* = 5; PMT = $123,000; FV = 850,000 (2,250,000 –1,400,000)
Solve for *i* = 25.5 percent

Choice B incorrectly uses the full NOI as the payment in the IRR calculation. Choice C incorrectly uses the full sales price of $2,250,000 as the FV in the IRR calculation.

Rationale

This Answer is Incorrect

First subtract debt service of $77,000 (0.055 × 0.70 × $2,000,000) from NOI of $200,000 to get cash flow of $123,000. At the end of his planned five-year holding period, Sinatra has a target sales price of $2.25 million; the anticipated future value is the sales price less the outstanding loan amount. The cash-on-cash IRR using keystrokes on a TI-BAII Plus is:

PV = –600,000 (based on 70 percent LTV, therefore 30 percent initial equity); *n* = 5; PMT = $123,000; FV = 850,000 (2,250,000 –1,400,000)
Solve for *i* = 25.5 percent

Choice B incorrectly uses the full NOI as the payment in the IRR calculation. Choice C incorrectly uses the full sales price of $2,250,000 as the FV in the IRR calculation.

iii.

Based on the property information, tenants will *least likely* have signed a:

- (●) percentage of sales lease.
- ( ) gross lease based on square footage.

net lease where the tenant is responsible for all expenses.

Rationale

This Answer is Incorrect

Office buildings are most likely to have leases that charge a rental rate per square foot where the landlord pays all building expenses (e.g., common area maintenance and utilities, etc.), and the tenants pay all individual tenant expenses (e.g., utilities for their space if separately metered). However, an office building owner may allocate CAMs back to tenants based on square footage or other criteria. Net leases are more common for single tenant uses, smaller retail developments, and warehouses; however, there may be situations where net leases are used for office buildings. Percentage-of-sales leases are the least likely as they are unique to retail and more common for larger retail properties. Percentage of sales leases are generally based on a natural breakpoint price per square footage plus a percentage of sales over a threshold.

Rationale

This Answer is Incorrect

Office buildings are most likely to have leases that charge a rental rate per square foot where the landlord pays all building expenses (e.g., common area maintenance and utilities, etc.), and the tenants pay all individual tenant expenses (e.g., utilities for their space if separately metered). However, an office building owner may allocate CAMs back to tenants based on square footage or other criteria. Net leases are more common for single tenant uses, smaller retail developments, and warehouses; however, there may be situations where net leases are used for office buildings. Percentage-of-sales leases are the least likely as they are unique to retail and more common for larger retail properties. Percentage of sales leases are generally based on a natural breakpoint price per square footage plus a percentage of sales over a threshold.

Rationale

This Answer is Incorrect

Office buildings are most likely to have leases that charge a rental rate per square foot where the landlord pays all building expenses (e.g., common area maintenance and utilities, etc.), and the tenants pay all individual tenant expenses (e.g., utilities for their space if separately metered). However, an office building owner may allocate CAMs back to tenants based on square footage or other criteria. Net leases are more common for single tenant uses, smaller retail developments, and warehouses; however, there may be situations where net leases are used for office buildings. Percentage-of-sales leases are the least likely as they are unique to retail and more common for larger retail properties. Percentage of sales leases are generally based on a natural breakpoint price per square footage plus a percentage of sales over a threshold.

Question 40
L2R39TB-AC052-1512
LOS: LOS-9030
Lesson Reference: Lesson 5: Due Diligence in Private Real Estate Investment, Indices and Private Market Real Estate Debt
Difficulty: medium
An investor purchases a $25 million office complex using $20 million of his own money. At the time purchased, the property provided net operating income of $2,000,000 annually. The bank financed the remaining balance at 6.5 percent on a non-amortizing loan. Five years later, the investor sells the property for $27.5 million. The IRR based on the investor's equity contribution will be *closest to*:

- (●) 10.4 percent.
- ( ) 12.0 percent.
- ( ) 14.0 percent.

Rationale
10.4 percent.

First subtract debt service of $325,000 (0.065 × $5,000,000) from NOI of $2,000,000 to get cash flow of $1,675,000. The cash-on-cash IRR using keystrokes on a TI-BAII Plus is:

$$\begin{gathered}\mathrm{PV} = -20{,}000{,}000;\ \mathrm{n} = 5;\ \mathrm{PMT} = 1{,}675{,}000;\\ \mathrm{FV} = 22{,}500{,}000\ (27{,}500{,}000 - 5{,}000{,}000)\\ \text{Solve for } \mathrm{I/Y} = 10.41 \text{ percent}\end{gathered}$$

The second choice incorrectly uses NOI as the payment and does not deduct the interest on the $5 million loan. The third choice incorrectly uses the total sale value of $27,500,000 as the FV.

Rationale
12.0 percent.

First subtract debt service of $325,000 (0.065 × $5,000,000) from NOI of $2,000,000 to get cash flow of $1,675,000. The cash-on-cash IRR using keystrokes on a TI-BAII Plus is:

$$\begin{gathered}\mathrm{PV} = -20{,}000{,}000;\ \mathrm{n} = 5;\ \mathrm{PMT} = 1{,}675{,}000;\\ \mathrm{FV} = 22{,}500{,}000\ (27{,}500{,}000 - 5{,}000{,}000)\\ \text{Solve for } \mathrm{I/Y} = 10.41 \text{ percent}\end{gathered}$$

The second choice incorrectly uses NOI as the payment and does not deduct the interest on the $5 million loan. The third choice incorrectly uses the total sale value of $27,500,000 as the FV.

Rationale

14.0 percent.

First subtract debt service of $325,000 (0.065 × $5,000,000) from NOI of $2,000,000 to get cash flow of $1,675,000. The cash-on-cash IRR using keystrokes on a TI-BAII Plus is:

$$\begin{gathered}\mathrm{PV} = -20{,}000{,}000;\ \mathrm{n} = 5;\ \mathrm{PMT} = 1{,}675{,}000; \\ \mathrm{FV} = 22{,}500{,}000\ (27{,}500{,}000 - 5{,}000{,}000) \\ \text{Solve for } \mathrm{I/Y} = 10.41 \text{ percent}\end{gathered}$$

The second choice incorrectly uses NOI as the payment and does not deduct the interest on the $5 million loan. The third choice incorrectly uses the total sale value of $27,500,000 as the FV.

Question 41
L2R39TB-AC045-1512
LOS: LOS-8940
Lesson Reference: Lesson 2: Types of Commercial Real Estate and an Introduction to Valuation
Difficulty: medium
Tannenbaum Management charges an additional 10 percent of sales over $250 psf on a 10,000 sf lease. The minimum lease is specified by the natural breakpoint. A tenant with sales of $275 psf during a good (above average) month would *most likely* prefer a contractual lease rate with:

- a higher natural breakpoint.
- a lease payment set at $275,000.
- the natural breakpoint of $250 psf.

Rationale
a higher natural breakpoint.
The tenant would most likely prefer to keep the natural breakpoint of $250 sales psf, particularly if $275,000 represents sales in a good month. The tenant would not want to increase the breakpoint. An increase would increase the minimum, which could result in a higher payment if sales fall below that higher breakpoint. A set lease payment of $275,000 is the equivalent in this current "good" month to a natural breakpoint at $250 sales psf plus 10 percent. The tenant would not want to lock in a rate based on sales that are likely higher than its average if there is a percentage lease based on a natural breakpoint that would result in a lower amount ($250,000 = $250 sales psf breakpoint × 10 percent × 10,000 sf).

Rationale
a lease payment set at $275,000.
The tenant would most likely prefer to keep the natural breakpoint of $250 sales psf, particularly if $275,000 represents sales in a good month. The tenant would not want to increase the breakpoint. An increase would increase the minimum, which could result in a higher payment if sales fall below that higher breakpoint. A set lease payment of $275,000 is the equivalent in this current "good" month to a natural breakpoint at $250 sales psf plus 10 percent. The tenant would not want to lock in a rate based on sales that are likely higher than its average if there is a percentage lease based on a natural breakpoint that would result in a lower amount ($250,000 = $250 sales psf breakpoint × 10 percent × 10,000 sf).

Rationale
the natural breakpoint of $250 psf.
The tenant would most likely prefer to keep the natural breakpoint of $250 sales psf, particularly if $275,000 represents sales in a good month. The tenant would not want to increase the breakpoint. An increase would increase the minimum, which could result in a higher payment if sales fall below that higher breakpoint. A set lease payment of $275,000 is the equivalent in this current "good" month to a natural breakpoint at $250 sales psf plus 10

percent. The tenant would not want to lock in a rate based on sales that are likely higher than its average if there is a percentage lease based on a natural breakpoint that would result in a lower amount ($250,000 = $250 sales psf breakpoint × 10 percent × 10,000 sf).

Question 42
L2R39TB-AC034-1512
LOS: LOS-8910
Lesson Reference: Lesson 1: Real Estate: Basic Forms and Characteristics and Private Market Real Estate Equity Investments
Difficulty: medium
An investor wants to invest $2.5 million; she requires a high degree of liquidity should her business require cash for working capital. She would be *least likely* to invest in a:

- public real estate debt investment.
- public real estate equity investment.
- private real estate equity investment.

Rationale
public real estate debt investment.
Due to each property's unique characteristics, private real estate may not be easily liquidated except at a substantial discount to market value. Market value assumes that a typical buyer and seller acting with prudence are entering an arm's length transaction. An investor who must sell the property quickly may not have time to look for a typical buyer, which sometimes requires substantial marketing to establish the potential buyers for a particular property.

Rationale
public real estate equity investment.
Due to each property's unique characteristics, private real estate may not be easily liquidated except at a substantial discount to market value. Market value assumes that a typical buyer and seller acting with prudence are entering an arm's length transaction. An investor who must sell the property quickly may not have time to look for a typical buyer, which sometimes requires substantial marketing to establish the potential buyers for a particular property.

Rationale
private real estate equity investment.
Due to each property's unique characteristics, private real estate may not be easily liquidated except at a substantial discount to market value. Market value assumes that a typical buyer and seller acting with prudence are entering an arm's length transaction. An investor who must sell the property quickly may not have time to look for a typical buyer, which sometimes requires substantial marketing to establish the potential buyers for a particular property.

Question 43
L2R39TB-AC030-1512
LOS: LOS-9030
Lesson Reference: Lesson 5: Due Diligence in Private Real Estate Investment, Indices and Private Market Real Estate Debt
Difficulty: medium
A prospective purchaser looks at a property with NOI of $243,000 per year. With debt service on an interest-only loan at 5.5 percent, the bank has agreed to loan $3,681,818 based on that NOI. The purchaser's maximum purchase price plus expenses that equates to a 12 percent equity yield rate (EYR) will be *closest to*:

- $0.3 million.
- $4.0 million.
- $5.7 million.

Rationale
$0.3 million.

The investor's pre-tax cash flow is $40,500 ($243,000 – $202,500); where $202,500 is the debt service at 5.5 percent on the loan. At that cash flow amount and 12 percent EYR, the total equity amount could be a maximum of:

$$\text{EYR} = \frac{\text{Pre-tax cash flow}}{\text{Equity}}$$

$$0.12 = \frac{\$40{,}500}{\text{Equity}} \rightarrow\rightarrow \text{Equity} = \$337{,}500$$

Total purchase price, then, can be as high as $4,019,318 ($337,500 + $3,681,818).

Choice A is only the amount of equity calculated; the purchase price includes the loan plus equity. Choice C incorrectly uses the NOI as the pre-tax cash flow, without deducting debt service of $202,500.

Rationale
$4.0 million.

The investor's pre-tax cash flow is $40,500 ($243,000 – $202,500); where $202,500 is the debt service at 5.5 percent on the loan. At that cash flow amount and 12 percent EYR, the total equity amount could be a maximum of:

$$\text{EYR} = \frac{\text{Pre-tax cash flow}}{\text{Equity}}$$

$$0.12 = \frac{\$40{,}500}{\text{Equity}} \rightarrow\rightarrow \text{Equity} = \$337{,}500$$

Total purchase price, then, can be as high as $4,019,318 ($337,500 + $3,681,818).

Choice A is only the amount of equity calculated; the purchase price includes the loan plus equity. Choice C incorrectly uses the NOI as the pre-tax cash flow, without deducting debt service of $202,500.

Rationale

$5.7 million.

The investor's pre-tax cash flow is $40,500 ($243,000 – $202,500); where $202,500 is the debt service at 5.5 percent on the loan. At that cash flow amount and 12 percent EYR, the total equity amount could be a maximum of:

$$\text{EYR} = \frac{\text{Pre-tax cash flow}}{\text{Equity}}$$

$$0.12 = \frac{\$40{,}500}{\text{Equity}} \rightarrow\rightarrow \text{Equity} = \$337,500$$

Total purchase price, then, can be as high as $4,019,318 ($337,500 + $3,681,818).

Choice A is only the amount of equity calculated; the purchase price includes the loan plus equity. Choice C incorrectly uses the NOI as the pre-tax cash flow, without deducting debt service of $202,500.

Question 44
L2AI-TBB204-1412
LOS: LOS-9070
Lesson Reference: Lesson 3: The Income Approach to Valuation
Difficulty: medium
A REIT that has a controlling interest in and serves as the general partner of a partnership that owns and operates all of the properties of the fund is best described as:

- An umbrella partnership.
- A DOWNREIT.
- An UPREIT.

Rationale

This Answer is Correct
Answer A is incorrect since an umbrella partnership is a general term used to describe both UPREITs and DOWNREITS. A DOWNREIT has several different partnerships and may own properties at the REIT level and the partnership level.

Question 45
L2R39TB-AC028-1512
LOS: LOS-9010
Lesson Reference: Lesson 5: Due Diligence in Private Real Estate Investment, Indices and Private Market Real Estate Debt
Difficulty: medium
Which of the following types of real estate indexes will *most likely* include the greatest number of properties with actual transactions?

- ○ Hedonic indexes.
- ○ Appraisal-based indexes.
- ◉ Repeat transactions indexes.

Rationale
✗ **Hedonic indexes.**
Repeat transactions indexes include only actual transactions. A hedonic index may include only one transaction, but based on the number of properties in an index it is most likely that a repeat transactions index will have the greatest number of actual transactions.

Rationale
✗ **Appraisal-based indexes.**
Repeat transactions indexes include only actual transactions. A hedonic index may include only one transaction, but based on the number of properties in an index it is most likely that a repeat transactions index will have the greatest number of actual transactions.

Rationale
✓ **Repeat transactions indexes.**
Repeat transactions indexes include only actual transactions. A hedonic index may include only one transaction, but based on the number of properties in an index it is most likely that a repeat transactions index will have the greatest number of actual transactions.

Question 46
L2EQ-ITEMSET-PQ3810-1411
LOS: LOS-8990
Lesson Reference: Lesson 4: The Cost Approach
Difficulty: medium

Use the following information to answer the next 5 questions:

Consider the following information:

Variable	Subject property	Comparables		
		1	2	3
Size (square feet)	30,000	35,000	20,000	25,000
Age (years)	10	16	6	20
Condition	Good	Average	Poor	Average
Location	Prime	Prime	Secondary	Secondary
Date of sale (months ago)		5	7	4
Sale price		7,000,000.00	5,500,000.00	4,500,000.00

Other information:

- Each adjustment is based on the unadjusted sales price of the comparable.
- The properties depreciate at 2% per annum.
- Condition adjustment: Good, none; Average, -10%; Poor, -20%.
- Location adjustment: Prime, none; Secondary; -15%
- Over the last 12 months, the market has been rising by 2.0% per month.

i.
The dollar amount of the adjustment that should be made to the price per square foot of Comparable Property 1 to reflect differences in respective conditions of the properties is *closest to*:

- (●) An increase of $20
- ( ) A decrease of $20
- ( ) A decrease of $40

Rationale
This Answer is Correct

Comparable Property 1's price per square foot = $7,000,000 / 35,000 = $200 per square foot

The price should be increased by 10%, or $20/sq. ft.

ii.

The dollar amount of the adjustment that should be made to the price per square foot of Comparable Property 1, to reflect difference in age of the properties is *closest to*:

- A decrease of $24
- An increase of $12
- An increase of $24

Rationale

This Answer is Correct

Comparable Property 1 is 6 years older than the subject property. Therefore, its price per square foot should be increased by 12%, or $24/sq. ft.

iii.

The dollar amount of the adjustment that should be made to the price per square foot of Comparable property 2, to account for differences in location is *closest to*:

- No adjustment
- A decrease of $41.25
- An increase of $41.25

Rationale

This Answer is Correct

Comparable Property 2's price per square foot = $5,500,000 / 20,000 = $275 per square foot

Its price should be increased by 15%, or $41.25/sq. ft.

iv.

The dollar amount of the adjustment that should be made to the price per square foot of Comparable Property 3 to account for the change in prices since its sale is *closest to*:

- A decrease of $25.20
- An increase of $14.40
- No adjustment

Rationale

This Answer is Correct

Comparable property 3's price per square foot = $4,500,000 / 25,000 = $180 per square foot

Its price should be increased by 8% or $14.40/sq. ft.

v.

Based on the sales comparison approach, the value of the subject property is *closest to*:

- ○ $9.71 million
- ◉ $9.27 million
- ○ $8.57 million

Rationale

This Answer is Correct

Adjustments	1	2	3
Age (years)	12.00%	−8.00%	20.00%
Condition	10.00%	20.00%	10.00%
Location	0.00%	15.00%	15.00%
Date of sale (months ago)	10.00%	14.00%	8.00%

		Comparables		
Adjustments	**Subject property**			
		1	**2**	**3**
Age (years)		24.00	−22.00	36.00
Condition		20.00	55.00	18.00
Location		0.00	41.25	27.00
Date of sale (months ago)		20.00	38.50	14.40
Adjusted price psf		264.00	387.75	275.40
Average price psf	309.05			
Size (square feet)	30,000			
Appraised value ($)	**9,271,500**			

Question 47
L2R39TB-AC025-1512
LOS: LOS-8950
Lesson Reference: Lesson 2: Types of Commercial Real Estate and an Introduction to Valuation
Difficulty: medium
An appraiser values a multi-family property with rents paid on a month-to-month basis rather than by lease. In the current market many comparable properties have sold within the last three months. The appraiser will *most likely* give more weight to the:

- ○ cost approach.
- ○ income approach.
- ◉ comparables approach.

Rationale
✗ **cost approach.**
The appraiser will be most likely to give more weight to the comparables approach because it will provide a better estimate of how much a typical buyer will pay.

Rationale
✗ **income approach.**
The appraiser will be most likely to give more weight to the comparables approach because it will provide a better estimate of how much a typical buyer will pay.

Rationale
✓ **comparables approach.**
The appraiser will be most likely to give more weight to the comparables approach because it will provide a better estimate of how much a typical buyer will pay.

Question 48
L2R39TB-AC019-1512
LOS: LOS-8970
Lesson Reference: Lesson 3: The Income Approach to Valuation
Difficulty: medium
A buyer agrees to purchase a property if the seller completes renovations to update the property to the standard of comparable properties. The property's current NOI is $5 million; the NOI will increase to $7.5 million after one year when the renovations are complete. Annual increases in NOI of 3.5 percent are expected thereafter. If the required return for properties of similar risk is 15 percent, the property's current value will be *closest to*:

- ○ $47.8 million.
- ● $63.0 million.
- ○ $65.2 million.

Rationale
✗ **$47.8 million.**

The property's value based on stable NOI is:

Value if renovated	$65.2 million	$7.5 million / (0.15 – 0.035)
Less: Loss in value	2.2 million	($7.5 – 5.0) / (1 + 0.15)
Value	$63.0 million	

Choice A incorrectly uses the required return in the denominator instead of the cap rate (*r* – *g*) to determine the "value if renovated." Choice C omits deducting the loss in value before the renovations are complete.

Rationale
✓ **$63.0 million.**

The property's value based on stable NOI is:

Value if renovated	$65.2 million	$7.5 million / (0.15 – 0.035)
Less: Loss in value	2.2 million	($7.5 – 5.0) / (1 + 0.15)
Value	$63.0 million	

Choice A incorrectly uses the required return in the denominator instead of the cap rate (*r* – *g*) to determine the "value if renovated." Choice C omits deducting the loss in value before the renovations are complete.

Rationale

$65.2 million.

The property's value based on stable NOI is:

Value if renovated	$65.2 million	$7.5 million / (0.15 – 0.035)
Less: Loss in value	2.2 million	($7.5 – 5.0) / (1 + 0.15)
Value	$63.0 million	

Choice A incorrectly uses the required return in the denominator instead of the cap rate ($r - g$) to determine the "value if renovated." Choice C omits deducting the loss in value before the renovations are complete.

Question 49
L2R39TB-AC039-1512
LOS: LOS-8930
Lesson Reference: Lesson 1: Real Estate: Basic Forms and Characteristics and Private Market Real Estate Equity Investments
Difficulty: medium
The risk-return profile for private equity real estate investments will *most likely* fall between:

- (●) corporate debt and equity.
- ( ) international equity and emerging market equity.
- ( ) U.S. long-term Treasury securities and corporate debt.

Rationale
✔ **corporate debt and equity.**
The risk-return profile will most likely be between corporate debt and equity securities.

Rationale
✘ **international equity and emerging market equity.**
The risk-return profile will most likely be between corporate debt and equity securities.

Rationale
✘ **U.S. long-term Treasury securities and corporate debt.**
The risk-return profile will most likely be between corporate debt and equity securities.

Question 50
L2EQ-PQ3802-1410
LOS: LOS-8960
Lesson Reference: Lesson 3: The Income Approach to Valuation
Difficulty: medium

Consider the following information regarding an apartment building:

- Number of units rented = 70 out of 90
- Rent = $1,600 per unit per month
- Other income = $650 per rented unit per year
- Operating expenses = 40% of effective gross income
- Property management fee = 20% of effective gross income
- Interest expense = $340,000

Given an income tax rate of 35%, the NOI for the property is *closest to*:

- (●) $555,800
- ( ) $432,289
- ( ) $334,800

Rationale

This Answer is Correct

Rental income at full occupancy (=90 × $1,600 × 12)	$1,728,000
Other income (90 × $650)	$58,500
Potential gross income	$1,786,500
Vacancy loss (20/90 × $1,786,500)	$397,000
Effective gross income	$1,389,500
Operating expenses (40% × $1,389,500)	$555,800
Property management fee (20% × 1,389,500)	$277,900
NOI	**$555,800**

Question 51
L2R39TB-AC023-1512
LOS: LOS-8990
Lesson Reference: Lesson 4: The Cost Approach
Difficulty: medium

An appraiser valuing a 10-year-old office building with 250,000 square feet determines that it could be constructed using modern methods and materials for $180 per square foot, not including the contractor's profit. Developers in that market generally require 10 percent of construction costs as profit. Such a building would have a 75-year economic life, and cap rates in the area are 6.5 percent.

Roof repairs totaling $125,000 are required, but will add at least that much to the value of the property. Other incurable structural problems will reduce economic life by 5 years. Additional HVAC costs will reduce NOI by $12,000 annually. Curable design deficiencies that reduce the building's value will cost $240,000 to remedy. The building is located in a retail area with excessive traffic for the type of business expected to locate in such a building. The appraiser expects this will reduce NOI by $80,000 per year. Land for a similar use is valued at $2.5 million.

The appraised value using the cost approach for this building will be *closest to*:

- ○ $37.8 million.
- ◉ $40.3 million.
- ○ $43.6 million.

Rationale
✗ **$37.8 million.**

The value of the property is:

Replacement costs:		
Construction costs	$45,000,000	(250,000 sf × $180 psf)
Developer's profit	4,500,000	($45 million × 0.10)
Total	$49,500,000	
Physical deterioration:		
Curable (roof)	(125,000)	
Incurable (structural)	(9,875,000)	[(49,500,000 – 125,000) × (10 + 5)/75]
Functional obsolescence:		
Curable	(240,000)	
Incurable (HVAC)	(184,615)	(12,000 / 0.065)
Locational obsolescence:	(1,230,769)	(80,000 / 0.065)
Land value	2,500,000	
Estimated total value	$40,344,616	

The first choice omits adding the land value to the total value. The third choice does not include the additional 5 years of effective age for the incurable structural deductions; it applies only the age as a percentage of total economic useful life (10/75).

Rationale

$40.3 million.

The value of the property is:

Replacement costs:		
Construction costs	$45,000,000	(250,000 sf × $180 psf)
Developer's profit	4,500,000	($45 million × 0.10)
Total	$49,500,000	
Physical deterioration:		
Curable (roof)	(125,000)	
Incurable (structural)	(9,875,000)	[(49,500,000 – 125,000) × (10 + 5)/75]
Functional obsolescence:		
Curable	(240,000)	
Incurable (HVAC)	(184,615)	(12,000 / 0.065)
Locational obsolescence:	(1,230,769)	(80,000 / 0.065)
Land value	2,500,000	
Estimated total value	$40,344,616	

The first choice omits adding the land value to the total value. The third choice does not include the additional 5 years of effective age for the incurable structural deductions; it applies only the age as a percentage of total economic useful life (10/75).

Rationale

$43.6 million.

The value of the property is:

Replacement costs:		
Construction costs	$45,000,000	(250,000 sf × $180 psf)
Developer's profit	4,500,000	($45 million × 0.10)
Total	$49,500,000	
Physical deterioration:		
Curable (roof)	(125,000)	

Incurable (structural)	(9,875,000)	[(49,500,000 – 125,000) × (10 + 5)/75]
Functional obsolescence:		
Curable	(240,000)	
Incurable (HVAC)	(184,615)	(12,000 / 0.065)
Locational obsolescence:	(1,230,769)	(80,000 / 0.065)
Land value	2,500,000	
Estimated total value	$40,344,616	

The first choice omits adding the land value to the total value. The third choice does not include the additional 5 years of effective age for the incurable structural deductions; it applies only the age as a percentage of total economic useful life (10/75).

Question 52
L2R39TB-AC050-1512
LOS: LOS-8990
Lesson Reference: Lesson 4: The Cost Approach
Difficulty: medium
An appraiser valuing a 20-year-old office building with 250,000 square feet determines that it can be constructed using modern methods and materials for $160 per square foot. Developers in that market generally require 10 percent of construction costs as profit. Such a building would have a 75-year economic life, and cap rates in the area are 6.5 percent. Roof repairs totaling $120,000 are required, but will add at least that much to the value of the property. Other incurable structural problems will reduce economic life by 10 years. Additional HVAC costs will reduce NOI by $15,000 annually. Curable design deficiencies that reduce the building's value will cost $250,000 to remedy. The building is located in a retail area with excessive traffic for the type of business expected to locate in such a building. The appraiser expects this will reduce NOI by $30,000 per year. Land for a similar use is valued at $1.8 million. The appraised value using the cost approach will be *closest to*:

- $24.8 million.
- $27.2 million.
- $33.1 million.

Rationale

$24.8 million.

The value of the property is:

Replacement costs:		
Construction costs	$40,000,000	(250,000 sf × $160 psf)
Developer's profit	4,000,000	($40 mm × 0.10)
Total	$44,000,000	
Physical deterioration:		
Curable (roof)	(120,000)	
Incurable (structural)	(17,552,000)	[(44,000,000 – 120,000) × (20 + 10)/75]
Functional obsolescence:		
Curable	(250,000)	
Incurable (HVAC)	(230,769)	(15,000 / 0.065)
Locational obsolescence:	(461,538)	(30,000 / 0.065)
Land value	1,800,000	
Estimated total value	$27,185,692	

The first choice omits the developer's profit from the calculation. The third choice does not include the additional 10 years of effective age for the incurable structural deductions; it applies only the age as a percentage of total economic useful life (20/75).

Rationale

✅ **$27.2 million.**

The value of the property is:

Replacement costs:		
Construction costs	$40,000,000	(250,000 sf × $160 psf)
Developer's profit	4,000,000	($40 mm × 0.10)
Total	$44,000,000	
Physical deterioration:		
Curable (roof)	(120,000)	
Incurable (structural)	(17,552,000)	[(44,000,000 – 120,000) × (20 + 10)/75]
Functional obsolescence:		
Curable	(250,000)	
Incurable (HVAC)	(230,769)	(15,000 / 0.065)
Locational obsolescence:	(461,538)	(30,000 / 0.065)
Land value	1,800,000	
Estimated total value	$27,185,692	

The first choice omits the developer's profit from the calculation. The third choice does not include the additional 10 years of effective age for the incurable structural deductions; it applies only the age as a percentage of total economic useful life (20/75).

Rationale

❌ **$33.1 million.**

The value of the property is:

Replacement costs:		
Construction costs	$40,000,000	(250,000 sf × $160 psf)
Developer's profit	4,000,000	($40 mm × 0.10)
Total	$44,000,000	
Physical deterioration:		
Curable (roof)	(120,000)	
Incurable (structural)	(17,552,000)	[(44,000,000 – 120,000) × (20 + 10)/75]
Functional obsolescence:		
Curable	(250,000)	

Incurable (HVAC)	(230,769)	(15,000 / 0.065)
Locational obsolescence:	(461,538)	(30,000 / 0.065)
Land value	1,800,000	
Estimated total value	$27,185,692	

The first choice omits the developer's profit from the calculation. The third choice does not include the additional 10 years of effective age for the incurable structural deductions; it applies only the age as a percentage of total economic useful life (20/75).

Question 53
L2R39TB-AC048-1512
LOS: LOS-8950
Lesson Reference: Lesson 2: Types of Commercial Real Estate and an Introduction to Valuation
Difficulty: medium
A developer considers two potential uses for a property he owns with an existing, dilapidated structure that has no value in use. When completed, Project 1 will have a value of $125 million and a cost of $103.5 million. Project 2 will have a value of $150 million and a cost of $118.5 million. The developer's 10 percent construction management fee has been included in construction costs. The developer estimates teardown costs of $1.5 million for the existing structure and he estimates the property will be worth $13 million as vacant land once teardown has occurred. The property's highest and best use will *most likely* be:

- ○ Project 1.
- ◉ Project 2.
- ○ vacant land.

Rationale
✗ **Project 1.**
The property's highest and best use is Project 2. The implied values for the land if vacant and if the projects are completed are:

	Vacant	Project 1	Project 2
Completed value	$13.0	$125.0	$150.0
Less: Teardown	1.5	1.5	1.5
Less: Construction	0.0	10 3.5	118.5
Implied land value	$11.5	$20.0	$30.0

Rationale
✓ **Project 2.**
The property's highest and best use is Project 2. The implied values for the land if vacant and if the projects are completed are:

	Vacant	Project 1	Project 2
Completed value	$13.0	$125.0	$150.0
Less: Teardown	1.5	1.5	1.5
Less: Construction	0.0	10 3.5	118.5
Implied land value	$11.5	$20.0	$30.0

Rationale
✗ **vacant land.**

The property's highest and best use is Project 2. The implied values for the land if vacant and if the projects are completed are:

	Vacant	Project 1	Project 2
Completed value	$13.0	$125.0	$150.0
Less: Teardown	1.5	1.5	1.5
Less: Construction	0.0	10 3.5	118.5
Implied land value	$11.5	$20.0	$30.0

Question 54
L2R39TB-ITEMSET-AC001-1512
LOS: LOS-8970
LOS: LOS-8990
LOS: LOS-8930
Lesson Reference: Lesson 1: Real Estate: Basic Forms and Characteristics and Private Market Real Estate Equity Investments
Difficulty: medium

Use the following information to answer the next 3 questions:

Sophie Costa-Mal, a real estate analyst at Equity Analytics in the U.S., presents several potential investment opportunities to Abeni Adanna, a real estate speculator from a western country on the African continent. Adanna is active in real estate projects in her home country and possesses significant management experience; she has transferred much of her knowledge to the property managers that she employs.

Costa-Mal decides to present her best opportunity last, and provides the information partially represented below in Exhibits 1 and 2 for the Argent building, a ten-year old multi-tenant office complex in a growing metropolis. Although Costa-Mal prepares an additional exhibit showing a market value analysis for the Argent building, she was unsure whether to present it because the last comparable sale was over two years ago, about the time the subject property was listed on the market for sale.

Adanna ultimately decides to make an initial offer on the property, including land, for $195 million.

Exhibit 1: Argent Building – NOI Forecast and Assumptions

	Year 1	Year 2	Year 3	Year 4
NOI	13,062,500	14,368,750	15,805,625	16,595,906

DCF Assumptions:

Holding period	3 years
Going-in capitalization rate	5.75 percent
Going-in growth rate	10.00 percent
Terminal capitalization rate	6.25 percent
Terminal growth rate	5.00 percent

Exhibit 2: Argent Building – Additional Information (millions)

Land value	$5.0
Replacement cost	$215.0
Total depreciation	$7.0

i.

Based on the information in Exhibit 1 and using discounted cash flow methodology, Adanna develops a value for the property *closest to*:

- $180.1 million.
- $203.4 million.
- $263.1 million.

Rationale

This Answer is Correct

The first step is to determine the required return to use as the discount rate for the forecast period. Remember, cap rate (5.75 percent) equals required return (x) less growth rate (10.0 percent), thus required return can be calculated as 15.75 percent = 10 percent + 5.75 percent. The calculations for present value of the forecast years and terminal value are:

$$V_0 = \frac{13{,}062{,}500}{(1+0.1575)^1} + \frac{14{,}368{,}750}{(1+0.1575)^2} + \frac{15{,}805{,}625}{(1+0.1575)^3} + \frac{\frac{16{,}595{,}906}{0.0625}}{(1+0.1575)^3} = 203{,}422{,}707$$

Choice A incorrectly discounts the terminal value by four periods not three. Choice C incorrectly uses the cap rate of 5.75 percent, not the required return of 15.75 percent, to discount the periodic cash flows and terminal value.

Rationale

This Answer is Correct

The first step is to determine the required return to use as the discount rate for the forecast period. Remember, cap rate (5.75 percent) equals required return (x) less growth rate (10.0 percent), thus required return can be calculated as 15.75 percent = 10 percent + 5.75 percent. The calculations for present value of the forecast years and terminal value are:

$$V_0 = \frac{13{,}062{,}500}{(1+0.1575)^1} + \frac{14{,}368{,}750}{(1+0.1575)^2} + \frac{15{,}805{,}625}{(1+0.1575)^3} + \frac{\frac{16{,}595{,}906}{0.0625}}{(1+0.1575)^3} = 203{,}422{,}707$$

Choice A incorrectly discounts the terminal value by four periods not three. Choice C incorrectly uses the cap rate of 5.75 percent, not the required return of 15.75 percent, to discount the periodic cash flows and terminal value.

Rationale

This Answer is Correct

The first step is to determine the required return to use as the discount rate for the forecast period. Remember, cap rate (5.75 percent) equals required return (x) less growth rate (10.0 percent), thus required return can be calculated as 15.75 percent = 10 percent + 5.75 percent. The calculations for present value of the forecast years and terminal value are:

$$V_0 = \frac{13{,}062{,}500}{(1+0.1575)^1} + \frac{14{,}368{,}750}{(1+0.1575)^2} + \frac{15{,}805{,}625}{(1+0.1575)^3} + \frac{\frac{16{,}595{,}906}{0.0625}}{(1+0.1575)^3} = 203{,}422{,}707$$

Choice A incorrectly discounts the terminal value by four periods not three. Choice C incorrectly uses the cap rate of 5.75 percent, not the required return of 15.75 percent, to discount the periodic cash flows and terminal value.

ii.

Based on a comparison of Adanna's offer to the value indicated by Exhibit 2, Adanna *most likely* estimates the effective age of the office building at:

- approximately eight years.
- more than eight years.
- less than eight years.

Rationale

This Answer is Incorrect

Exhibit 2 provides data to determine value according to the cost approach, where: the value of a property = land value + building replacement cost – total depreciation. Exhibit 2 data estimates the property value at $213 million ($5 million + $215 million – $7 million). Adanna's initial offer of $195 million is less than the value determined by the cost method. One reason may be that she estimated the effective age higher than eight years; this would increase the ratio of effective age to total economic useful life applied for incurable physical depreciation, thus increasing total depreciation and lowering the value determined by the cost method.

Rationale

This Answer is Incorrect

Exhibit 2 provides data to determine value according to the cost approach, where: the value of a property = land value + building replacement cost – total depreciation. Exhibit 2 data estimates the property value at $213 million ($5 million + $215 million – $7 million). Adanna's initial offer of $195 million is less than the value determined by the cost method. One reason may be that she estimated the effective age higher than eight years; this would increase the ratio of effective age to total economic useful life applied for incurable physical depreciation, thus increasing total depreciation and lowering the value determined by the cost method.

Rationale

This Answer is Incorrect

Exhibit 2 provides data to determine value according to the cost approach, where: the value of a property = land value + building replacement cost – total depreciation. Exhibit 2 data estimates the property value at $213 million ($5 million + $215 million – $7 million). Adanna's initial offer of $195 million is less than the value determined by the cost method. One reason may be that she estimated the effective age higher than eight years; this would increase the ratio of effective age to total economic useful life applied for incurable physical depreciation, thus increasing total depreciation and lowering the value determined by the cost method.

iii.

Costa-Mal would *most likely* use which valuation method as a baseline to value the opportunity she presents to Adanna?

- Market value.
- Intrinsic value.
- Fair market value.

Rationale

This Answer is Incorrect

Real estate valuation uses the *market value* standard in which the appraiser attempts to determine a price at which the seller and—after adequate marketing—potential buyers for a particular property will agree to a transaction. Fair market value, by contrast, assumes a liquid market with little marketing and a more or less homogeneous product of its type. Intrinsic value is the price at which buyers and sellers will agree when both parties reach the same conclusions about the property's value drivers. Because this is not a liquid market and marketing has not worked (as indicated by the information that the subject property has been on the market for almost two years), intrinsic value based on projected cash flow would most likely provide the best baseline.

Rationale

This Answer is Incorrect

Real estate valuation uses the *market value* standard in which the appraiser attempts to determine a price at which the seller and—after adequate marketing—potential buyers for a particular property will agree to a transaction. Fair market value, by contrast, assumes a liquid market with little marketing and a more or less homogeneous product of its type. Intrinsic value is the price at which buyers and sellers will agree when both parties reach the same conclusions about the property's value drivers. Because this is not a liquid market and marketing has not worked (as indicated by the information that the subject property has been on the market for almost two years), intrinsic value based on projected cash flow would most likely provide the best baseline.

Rationale

This Answer is Incorrect

Real estate valuation uses the *market value* standard in which the appraiser attempts to determine a price at which the seller and—after adequate marketing—potential buyers for a particular property will agree to a transaction. Fair market value, by contrast, assumes a liquid market with little marketing and a more or less homogeneous product of its type. Intrinsic value is the price at which buyers and sellers will agree when both parties reach the same conclusions about the property's value drivers. Because this is not a liquid market and marketing has not worked (as indicated by the information that the subject property has been on the market for almost two years), intrinsic value based on projected cash flow would most likely provide the best baseline.

Question 55
L2AI-TBB201-1412
LOS: LOS-8960
Lesson Reference: Lesson 3: The Income Approach to Valuation
Difficulty: medium
A 30-unit retail shopping mall rents for $3,000 per unit per month. It currently has 25 units rented. Operating expenses including property taxes, insurance, maintenance, and advertising are typically 35% of effective gross income. The property manager is paid 5% of effective gross income. Other income from peripheral services is expected to average $600 per rented unit per year. Which of the following values is closest to the annual NOI of the property?

- $540,000
- $549,000
- $658,800

Rationale

This Answer is Correct

Total annual gross income = 30 × $3000 × 12	= $1,080,000
Other income = 30 × 600	= $18,000
Potential Gross Income	= $1,098,000
Vacancy loss = 5/30 × $1,098,000	= ($183,000)
Effective gross income	= $915,000
Property management = 5% of $915,000	= ($45,750)
Other operating expenses = 35% × $915,000	= ($320,250)
Net Operating Income	= $549,000

Question 56
L200-PQ0040-1412
LOS: LOS-8920
Lesson Reference: Lesson 1: Real Estate: Basic Forms and Characteristics and Private Market Real Estate Equity Investments
Difficulty: medium
What are the primary determinants of revenue for farmland and timberland properties?

- ○ Harvest quantities and leasing prices
- ○ Leasing prices and commodity prices
- ◉ Commodity prices and harvest quantities

Rationale

This Answer is Correct
Commodity prices and harvest quantities are the primary determinants of revenue for farmland and timberland properties.

Question 57
L2AI-TBX101-1502
LOS: LOS-8990
Lesson Reference: Lesson 4: The Cost Approach
Difficulty: easy
A real estate analyst is using the cost approach to value a block of residential apartments. In her analysis she identifies two types of physical deterioration in the property: first, a section of the roof would need repairing, and second, the stairwells of the property would need modification to comply with current regulations. It is expected that the repair of the roof would increase the value of the property by the cost of fixing it; however, the costs incurred in redesigning the stairwells would not be recovered. Which of the following *best* describes these forms of physical depreciation?

	Roof	Stairwell
A.	Curable	Incurable
B.	Curable	Curable
C.	Incurable	Curable

- (●) Row A
- ( ) Row B
- ( ) Row C

Rationale

This Answer is Correct

Curable deterioration refers to repairs that are expected to increase the value of the property by at least the cost of the repairs. This is deducted from the replacement cost of the property. Incurable deterioration refers to improvements that will not recoup their cost in value. An adjustment is made to the value of the property according to the property's age to reflect this difference in value with the value of a new building.

Question 58
L2R39TB-AC029-1512
LOS: LOS-9010
Lesson Reference: Lesson 5: Due Diligence in Private Real Estate Investment, Indices and Private Market Real Estate Debt
Difficulty: medium
Which of the following will *most likely* be a problem with transactions-based indexes but not appraisal-based indexes?

- ○ Smoothed volatility.
- ○ Unique property characteristics.
- ◉ Introduction of random statistical “noise.”

Rationale
✗ **Smoothed volatility.**
Transactions-based indexes run the risk of introducing price fluctuations or random distortions, or “noise,” due to their regression-based derivation.

Rationale
✗ **Unique property characteristics.**
Transactions-based indexes run the risk of introducing price fluctuations or random distortions, or “noise,” due to their regression-based derivation.

Rationale
✓ **Introduction of random statistical “noise.”**
Transactions-based indexes run the risk of introducing price fluctuations or random distortions, or “noise,” due to their regression-based derivation.

Question 59
L2R39TB-AC053-1512
LOS: LOS-9030
Lesson Reference: Lesson 5: Due Diligence in Private Real Estate Investment, Indices and Private Market Real Estate Debt
Difficulty: medium
An investor obtains a ten-year, non-amortizing loan at 5.25 percent interest to finance the purchase of Property Z, an office complex which provides current net operating income of $1,000,000 annually. Based on comparable sales, the appraisal results in a value for Property Z at an NOI multiple of 15. The bank's financing terms include a maximum loan-to-value of 80 percent and a minimum debt service credit ratio of 1.5. The maximum loan amount the investor can borrow to finance the purchase of Property Z will be *closest to*:

- (●) 12.0 million.
- ( ) 12.7 million.
- ( ) 15.0 million.

Rationale
12.0 million.

The appraisal value based on the NOI multiplier is $1,000,000 × 15 = $15,000,000. The financing terms dictate a maximum loan-to-value (LTV) of 80 percent, which results in a maximum loan of $12,000,000 based on LTV.

The financing terms also dictate a minimum debt service credit ratio (DSCR) of 1.5. Based on the current NOI of $1,000,000 and DCSR of 1.5 the minimum debt service is $666,667.

$$\text{Maximum debt service} = \frac{\text{NOI}}{\text{DSCR}} = \frac{\$1{,}000{,}000}{1.5} = \$666{,}667$$

The interest rate on the loan is 5.25 percent. Based on the maximum debt service of $666,667, the maximum loan amount is $12,698,413

$$\text{Loan amount} = \frac{\text{Maximum debt service}}{\text{Mortgage rate}} = \frac{\$666{,}667}{0.0525} = \$12{,}698{,}413$$

The bank will only loan the lower of the two values calculated; therefore, the loan will be $12.0 million.

The second choice is the maximum loan amount based on the minimum DSCR; however, the bank will loan on the lower of the maximum LTV or minimum DSCR. The third choice is the appraisal value used to calculate LTV.

Rationale
12.7 million.

The appraisal value based on the NOI multiplier is $1,000,000 × 15 = $15,000,000. The financing terms dictate a maximum loan-to-value (LTV) of 80 percent, which results in a maximum loan of $12,000,000 based on LTV.

The financing terms also dictate a minimum debt service credit ratio (DSCR) of 1.5. Based on the current NOI of $1,000,000 and DCSR of 1.5 the minimum debt service is $666,667.

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Rationale

15.0 million.

The appraisal value based on the NOI multiplier is $1,000,000 × 15 = $15,000,000. The financing terms dictate a maximum loan-to-value (LTV) of 80 percent, which results in a maximum loan of $12,000,000 based on LTV.

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The second choice is the maximum loan amount based on the minimum DSCR; however, the bank will loan on the lower of the maximum LTV or minimum DSCR. The third choice is the appraisal value used to calculate LTV.

Question 60

L200-PQ0041-1412

LOS: LOS-8930

Lesson Reference: Lesson 1: Real Estate: Basic Forms and Characteristics and Private Market Real Estate Equity Investments

Difficulty: medium

If a real estate investor has a fund with a high loan-to-value ratio and she expects a strong decline in GDP next year, which of the following would not be a risk factor she might experience?

- Illiquid conditions on her fund
- Unexpected inflation
- Intensifying losses due to leverage

Rationale

This Answer is Correct

Illiquidity and intensification of losses would be major risk factors for a high loan-to-value real estate fund during a recession, whereas unexpected inflation would be a plus for the investor, as it would help push prices up a little.

Question 61
L2EQ-PQ3815-1410
LOS: LOS-9030
Lesson Reference: Lesson 5: Due Diligence in Private Real Estate Investment, Indices and Private Market Real Estate Debt
Difficulty: medium
A property that has a yearly NOI of $700,000 has recently been valued at $8.3 million. A real estate lender is willing to make an 8% interest-only loan as long as the loan-to-value ratio does not exceed 75% and the DSCR is at least 1.40. Based on this information, the maximum loan amount is *closest to*:

- $6.250 million
- $6.225 million
- $6.125 million

Rationale

This Answer is Correct

Based on the loan-to-value ratio, the loan amount equals $6,225,000(75% × $8,300,000).

Maximum debt service = NOI / DSCR = $700,000 / 1.40 = $500,000

Since this is an interest-only loan, the loan amount can be calculated as:

Loan amount = Debt service payment / Interest rate = $500,000 / 0.08 = $6,250,000

The loan-to-value ratio results in a lower loan amount. Therefore, the maximum loan amount equals **$6,225,000.**

Question 62
L2R39TB-AC018-1512
LOS: LOS-8960
Lesson Reference: Lesson 3: The Income Approach to Valuation
Difficulty: medium
An analyst evaluates Hawthorne Apartments, a 40-unit multi-family building; all units rent for $1,250 per month. The analyst reviews similar properties and determines that collection and vacancy losses are about 5 percent of potential gross income. Additional income from laundry and parking averages $450 per rented unit per month. The property is currently owner managed, but the analyst anticipates paying 10 percent of effective gross income to hire a property manager. Operating expenses are 40 percent of effective gross income. The analyst calculates a net operating income for this property *closest to*:

- $285,000
- $388,000
- $393,000

Rationale
$285,000

Net operating income is:

Gross rental income	$600,000	($1,250 x 12 x 40)
Other income	216,000	($450 x 12 x 40)
Potential gross income	$816,000	
Less: Vacancy loss	40,800	(0.05 x $816,000)
Effective gross income	$775,200	
Less: Operating expenses	310,080	(0.40 x $775,200)
Less: Property management	77,520	(0.10 x $775,200)
Net operating income	$387,600	

The first choice omits adding other income for parking and laundry; this changes potential gross income and thus changes the subsequent inputs. The third choice applies the vacancy loss of 5 percent only to gross rental income, not potential gross income; this changes effective gross income and thus changes the subsequent inputs.

Rationale
$388,000

Net operating income is:

Gross rental income	$600,000	($1,250 x 12 x 40)

Other income	216,000	($450 x 12 x 40)
Potential gross income	$816,000	
Less: Vacancy loss	40,800	(0.05 x $816,000)
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Less: Property management	77,520	(0.10 x $775,200)
Net operating income	$387,600	

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Rationale

$393,000

Net operating income is:

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Other income	216,000	($450 x 12 x 40)
Potential gross income	$816,000	
Less: Vacancy loss	40,800	(0.05 x $816,000)
Effective gross income	$775,200	
Less: Operating expenses	310,080	(0.40 x $775,200)
Less: Property management	77,520	(0.10 x $775,200)
Net operating income	$387,600	

The first choice omits adding other income for parking and laundry; this changes potential gross income and thus changes the subsequent inputs. The third choice applies the vacancy loss of 5 percent only to gross rental income, not potential gross income; this changes effective gross income and thus changes the subsequent inputs.

Question 63
L2R39TB-AC043-1512
LOS: LOS-8930
Lesson Reference: Lesson 1: Real Estate: Basic Forms and Characteristics and Private Market Real Estate Equity Investments
Difficulty: medium
The term “core property” with respect to institutional real estate equity portfolios would *most likely* apply to:

- ○ parking lots.
- ○ restaurant property.
- ◉ single-use warehouse space.

Rationale
✗ **parking lots.**
Core real estate holdings generally include office, industrial, warehouse, retail, and multi-family because they are low risk relative to other properties.

Rationale
✗ **restaurant property.**
Core real estate holdings generally include office, industrial, warehouse, retail, and multi-family because they are low risk relative to other properties.

Rationale
✓ **single-use warehouse space.**
Core real estate holdings generally include office, industrial, warehouse, retail, and multi-family because they are low risk relative to other properties.

Question 64

L200-PQ0042-1412

LOS: LOS-8950

Lesson Reference: Lesson 2: Types of Commercial Real Estate and an Introduction to Valuation

Difficulty: medium

Projects A, B, and C have costs of $5 million, $7 million, and $10 million, respectively. Additionally, projects A, B, and C have implied land values of $1.5 million, $1.75 million, and $1.85 million. Which project is the highest and best use of the property?

- (●) Project C
- ( ) Project B
- ( ) Project A

Rationale

This Answer is Correct

Project C is the correct answer because the highest and best use of the land is the project with the highest implied land value.

Question 65
L2EQ-PQ3806-1410
LOS: LOS-8970
Lesson Reference: Lesson 3: The Income Approach to Valuation
Difficulty: medium
A property's NOI is expected to be $350,000 for each of the next 5 years. Starting in Year 6, annual NOI is expected to increase to $500,000 and grow at 1.5% annually thereafter. The value of the property is also expected to increase at 1.5% per year after Year 5. Given a required rate of return of 10% and that investors expect to hold the property for 5 years, the value of the property today is *closest to*:

- ○ $6.33 million
- ○ $7.21 million
- ◉ $4.98 million

Rationale

This Answer is Correct

The present value of NOI for Years 1–5 can be calculated as:

N = 5; I/Y = 10; PMT = 350,000; FV = 0; CPT PV ⟶ PV = $1,326,775.369

Terminal value at the end of Year 5 is calculated as:

$\text{Terminal value}_5 = \text{NOI}_6 / \text{Cap rate}$

$\text{Terminal value}_5 = 500{,}000 / (10\% - 1.5\%)$

$\text{Terminal value}_5 = \$5{,}882{,}352.941$

The present value of the terminal value can be calculated as:

N = 5; I/Y = 10; PMT = 0; FV = 5,882,352.941; CPT PV ⟶ PV = $3,652,478.371

Current value of the property = 1,326,775.369 + 3,652,478.371 = **$4,979,253.74**

Question 66

L2AI-TB0003-1412

LOS: LOS-8930

Lesson Reference: Lesson 1: Real Estate: Basic Forms and Characteristics and Private Market Real Estate Equity Investments

Difficulty: medium

Which of the following types of private real estate investment is least likely to provide an effective inflation hedge?

- (●) A commercial property with long-term fixed leases.
- ( ) A retail property with lease payments linked to retail unit turnover.
- ( ) An office property with short-term lease contracts.

Rationale

This Answer is Correct

Inflation reduces the real returns to investors on fixed incomes. It is likely that the commercial property with long-term fixed leases will provide the least protection against unexpected inflation since the fixed lease payments will fall in real terms as inflation occurs. Answer B is incorrect since, in inflationary times, it is likely that the turnover of retail units will increase and lease payments will increase in line with them, hence protecting the investor against inflation. Answer C is incorrect since short-term lease contracts can be renegotiated to incorporate the effects of inflation and protect the real returns to property investors.

Question 67
L2AI-TB0002-1412.xml
LOS: LOS-8920
Lesson Reference: Lesson 1: Real Estate: Basic Forms and Characteristics and Private Market Real Estate Equity Investments
Difficulty: medium

Tim Robertson, CFA, is a fund manager of traditional assets such as equities and fixed-income securities who is looking to diversify into alternative investments. He arranges a meeting with his broker and raises the topic of alternatives investments. His broker makes the following two statements:

> Statement 1:
>
> "Due to the large amount of smart institutional money that is invested directly in real estate markets, it is often difficult to earn an excess return through taking advantage of inefficiencies versus a less efficient market like the stock market."
>
> Statement 2:
>
> "Real estate investment is largely a passive style of investment—while some investors may choose to rent out property to generate income, a vast majority of investors are looking for capital growth through passively holding the asset over time."

How many of the broker comments are most likely accurate?

- (●) Neither.
- ( ) One.
- ( ) Both.

Rationale

This Answer is Correct

Statement 1 is incorrect since real estate markets tend to have fewer participants than stock markets and hence offer more inefficiencies for investors with specialized knowledge to earn excess returns.
Statement 2 is incorrect since most institutional real estate investments are leased out to generate rental income over the long term. This involves substantial active management in negotiating leases, maintaining properties, and collecting rents.

Question 68
L2R39TB-AC007-1512
LOS: LOS-8910
Lesson Reference: Lesson 1: Real Estate: Basic Forms and Characteristics and Private Market Real Estate Equity Investments
Difficulty: medium
A financial advisor's young client owns two successful businesses and exhibits strong management skills. The client also has several banking relationships. The client's portfolio, funded with cash from the businesses, consists of U.S. equity securities. Which form of real estate investment will *most likely* give the client diversification benefits along with the highest return?

- ○ REITs.
- ○ Mortgage-backed securities.
- ● A commercial office building.

Rationale
✗ **REITs.**
A commercial office building is the least liquid of the three options. Generally investors expect a higher return for lower liquidity; the commercial building should provide the highest return. A commercial office building will also provide diversification. This choice is justified based on the long time horizon for a younger client and his particularly strong management skills.

Rationale
✗ **Mortgage-backed securities.**
A commercial office building is the least liquid of the three options. Generally investors expect a higher return for lower liquidity; the commercial building should provide the highest return. A commercial office building will also provide diversification. This choice is justified based on the long time horizon for a younger client and his particularly strong management skills.

Rationale
✓ **A commercial office building.**
A commercial office building is the least liquid of the three options. Generally investors expect a higher return for lower liquidity; the commercial building should provide the highest return. A commercial office building will also provide diversification. This choice is justified based on the long time horizon for a younger client and his particularly strong management skills.

Question 69
L2R39TB-AC010-1512
LOS: LOS-8930
Lesson Reference: Lesson 1: Real Estate: Basic Forms and Characteristics and Private Market Real Estate Equity Investments
Difficulty: medium
Which of the following will *most likely* offer the greatest diversification benefits to an endowment fund's portfolio that is solely made up of publicly traded stocks and bonds?

- ○ Real estate loans.
- ○ Real estate investment trust (REIT).
- ◉ Private equity real estate investments.

Rationale
✗ **Real estate loans.**
Loans and REITs generally tend toward correlation with bonds and stocks, respectively. Private equity investments in real estate, however, will most likely have lower correlation with other asset classes, offering greater diversification benefits.

Rationale
✗ **Real estate investment trust (REIT).**
Loans and REITs generally tend toward correlation with bonds and stocks, respectively. Private equity investments in real estate, however, will most likely have lower correlation with other asset classes, offering greater diversification benefits.

Rationale
✓ **Private equity real estate investments.**
Loans and REITs generally tend toward correlation with bonds and stocks, respectively. Private equity investments in real estate, however, will most likely have lower correlation with other asset classes, offering greater diversification benefits.

Question 70
L2R39TB-AC026-1512
LOS: LOS-9000
Lesson Reference: Lesson 5: Due Diligence in Private Real Estate Investment, Indices and Private Market Real Estate Debt
Difficulty: medium
Which of the following would a buyer be *most likely* to uncover during the due diligence process for a large manufacturing property?

- Use of the wrong discount rate in valuing the property.
- An environmental contaminant that might prevent the buyer's intended use.
- A change in governmental regulation that might prevent the buyer's intended use.

Rationale
Use of the wrong discount rate in valuing the property.
The due diligence process to purchase a large manufacturing property would be likely to include an environmental inspection that could find an environmental contaminant that could prevent the buyer's intended use.

Rationale
An environmental contaminant that might prevent the buyer's intended use.
The due diligence process to purchase a large manufacturing property would be likely to include an environmental inspection that could find an environmental contaminant that could prevent the buyer's intended use.

Rationale
A change in governmental regulation that might prevent the buyer's intended use.
The due diligence process to purchase a large manufacturing property would be likely to include an environmental inspection that could find an environmental contaminant that could prevent the buyer's intended use.

Question 71
L2EQ-PQ3807-1410
LOS: LOS-8970
Lesson Reference: Lesson 3: The Income Approach to Valuation
Difficulty: medium
Sophie wants to estimate the value of a property which was leased 5 years ago at $400,000 per year. The next rent review is in another 3 years. The estimated rental value (ERV) in 3 years based on current market conditions is $650,000 per year and the all-risks yield on comparable fully rented properties is 5%. Assuming that a 4% discount rate is appropriate for term rent, the value of the property is *closest to*:

- (●) $12.40 million
- ( ) $12.67 million
- ( ) $14.11 million

Rationale

This Answer is Correct

The present value of the term rent of $400,000 per year for 3 years is calculated as:

N = 3; I/Y = 4; PMT = 400,000; FV = 0; CPT PV ⟶ PV = $1,110,036.413

The value of reversion to ERV (at the time of the rent review) is calculated as:

Value of reversion to ERV = $650,000 / 5% = $13,000,000

The present value of the reversion to ERV is calculated as:

N = 3; I/Y = 5; PMT = 0; FV = 13,000,000; CPT PV ⟶ PV = $11,229,888.78

Total estimated value of the property = $1,110,036.413 + $11,229,888.78 = **$12,339,925.19**

Question 72
L2R39TB-AC047-1512
LOS: LOS-8940
Lesson Reference: Lesson 2: Types of Commercial Real Estate and an Introduction to Valuation
Difficulty: medium
An analyst valuing a commercial property in the U.S. market will *most likely* apply the standard of value known as:

- (●) market value.
- ( ) intrinsic value.
- ( ) investment value.

Rationale
✔ **market value.**
Market value will be based on a typical buyer and seller who are acting with prudence. Market value is generally the appropriate value for long-term bank financing necessary in most real estate transactions. Intrinsic value generally considers all characteristics of a property and uses a cash flow based model to determine value. Investment value represents the value to a *specific* investor, not a *typical* investor.

Rationale
✘ **intrinsic value.**
Market value will be based on a typical buyer and seller who are acting with prudence. Market value is generally the appropriate value for long-term bank financing necessary in most real estate transactions. Intrinsic value generally considers all characteristics of a property and uses a cash flow based model to determine value. Investment value represents the value to a *specific* investor, not a *typical* investor.

Rationale
✘ **investment value.**
Market value will be based on a typical buyer and seller who are acting with prudence. Market value is generally the appropriate value for long-term bank financing necessary in most real estate transactions. Intrinsic value generally considers all characteristics of a property and uses a cash flow based model to determine value. Investment value represents the value to a *specific* investor, not a *typical* investor.