Real Estate Principles
Chapter 19 Quiz

1. A borrower took out a straight loan of $265,000 for 10 years at a 15% per annum interest rate. How much interest would he pay over the course of the loan?
   A. $167,500
   B. $176,666
   C. $397,500
   D. $795,000

2. If a property produces a monthly income of $1,200 and the appropriate gross income multiplier is 10.72, what is the value of the property?
   A. $12,864
   B. $147,888
   C. $154,368
   D. $112,500

3. A building that has interior dimensions of 25 feet by 30 feet and walls 6 inches thick will cover an area of:
   A. 750 square feet
   B. 777.75 square feet
   C. 806 square feet
   D. 696 square feet

4. A rectangular lot is 900 square yards in area. It has a 45-foot frontage. How deep is the lot?
   A. 6.66 feet
   B. 20 feet
   C. 60 feet
   D. 180 feet

5. A property that is 220 feet in width and 330 feet in length contains how many acres?
   A. 1-2/3 acres
   B. 1-3/5 acres
   C. 5 acres
   D. 6 acres

6. A bank made an amortized loan for $1,140,000, payable $8,000 or more per month for a 30-year term. If the interest rate for the loan is 7%, how much will the first monthly payment reduce the principal balance?
   A. $1,350
   B. $1,425
   C. $1,440
   D. $6,650

7. A farm's southern boundary runs for 7,920 feet along an east-west road. Its western boundary extends northward for 7,920 feet from the road. Its eastern boundary extends northward for 3,960 feet from the road. The northern boundary is an irrigation canal that connects the open sides. How many acres is this farm?

A. 270 acres
B. 540 acres
C. 1,080 acres
D. 1,440 acres

8. In order to earn $750 per month, an investor would have to invest how much at a 5% per annum rate of return?

A. $60,000
B. $180,000
C. $200,000
D. $240,000

9. An appraiser values an investment property at $200,000 using a capitalization rate of 9%, based on its annual income of $18,000. What would the value of the property be if a 12% capitalization rate is applied?

A. $125,000
B. $150,000
C. $211,500
D. $225,000

10. A property is reassessed at $600,000. The applicable tax rate is 1.15%. What will the new monthly property tax bill be?

A. $57.50
B. $575
C. $5,750
D. $6,900

11. A homeowner wanted to expand his current rectangular lot, which measured 17,550 square feet and was 150 feet deep. The rectangular lot next door was for sale, which contained 9,000 square feet and also was 150 feet deep. If he purchased the neighboring lot, what would be the total frontage of the combined lot?

A. 57 feet
B. 157 feet
C. 177 feet
D. 197 feet

12. An appraiser is valuing a single-family rental property that rents for $1,280 per month. The property across the street sold last month for $180,000, and rented for $1,200 per month. What is the value of the property being valued?

A. $168,750
B. $192,000
C. $204,800
D. $220,000

13. A buyer bought a house for 20% less than the listed price. Later, she sold it for the originally listed price. What percentage of profit did she make?

A. 10%
B. 20%
C. 25%
D. 50%

14. A commercial property rents for $3,000 per month. Its fixed operating expenses are $9,000 per year; in addition, the property was vacant for three months during the past five years. If a 10% capitalization rate is used, what is the estimated value of the property?

A. $237,000
B. $252,000
C. $273,000
D. $336,000

15. A borrower paid $9,450 interest on a straight note for $70,000 at an annual interest rate of 9%. What was the length of the loan term?

A. 12 months
B. 18 months
C. 21 months
D. 24 months

Answer Key with Explanations

1. C
Explanation: A straight note is one where the entire principal amount will be paid as a balloon payment at the end. Therefore, the interest is calculated on the entire principal amount each year. First, calculate each year's interest payment; you know the whole and the percentage, so use the formula W × % = P ($265,000 × .15 = $39,750). Multiply that figure by 10 years to calculate the total amount of interest ($39,750 × 10 = $397,500).

2. C
Explanation: This requires you to convert from monthly rent to a gross income multiplier (which is based on yearly income). Multiply the monthly rent by 12 months ($1,200 × 12 = $14,400) and then multiply the annual income by the gross income multiplier ($14,400 × 10.72 = $154,368).

3. C
Explanation: Don't forget to add six inches to each wall in order to calculate the exterior dimensions of the building. The exterior dimensions, therefore, should be 26 feet by 31 feet. Multiply 26 feet by 31 feet to arrive at a square footage of 806 square feet.

4. D
Explanation: First, convert the area of the lot from square yards to square feet (900 square yards × 9 square feet per square yard = 8,100 square feet). Then, divide the square footage by the frontage to determine the depth (8,100 square feet ÷ 45 feet = 180 feet).

5. A
Explanation: First, multiply the width by the length to calculate square footage (220 feet × 330 feet = 72,600 square feet). Divide the square footage to calculate the acreage (72,600 square feet ÷ 43,560 square feet per acre = 1.66 acres).

6. A
Explanation: First, calculate the annual interest payment; you know the whole and the percentage, so use the formula W × % = P ($1,140,000 × .07 = $79,800). Divide that amount by 12 to calculate the first interest payment ($79,800 ÷ 12 = $6,650). Subtract that amount from the standard monthly payment to calculate how much will be applied to principal ($8,000 – $6,650 = $1,350).

7. C
Explanation: Because one of the edges of the farm is a diagonal line, we'll need to break the farm down into component shapes to solve this problem. There should be a triangle that is 3,960 feet high and 7,920 feet wide, and below that should be a rectangle that is 3,960 feet high and 7,920 feet wide. First, calculate the area of the triangle (1/2 × 3,960 feet × 7,920 feet = 15,681,600 square feet). Next, calculate the area of the rectangle (3,960 feet × 7,920 feet = 31,363,200 square feet). Add the two areas together (15,681,600 square feet + 31,363,200 square feet = 47,044,800 square feet) and divide into acres (47,044,800 square feet ÷ 43,560 square feet per acre = 1,080 acres).

8. B
Explanation: First, calculate the annual income from the investment ($750 per month × 12 months = $9,000 per year). Now calculate the total investment amount; you know the part and the percentage, so use the formula P ÷ % = W ($9,000 ÷ .05 = $180,000).

9. B
Explanation: All that needs to be done to solve this question is divide the annual income by the new capitalization rate ($18,000 ÷ 12% = $150,000). Because the desired rate and annual income are known, there's no need to know the value at a 9% rate.

10. B
Explanation: Multiply the property value by the tax rate to find the annual tax ($600,000 × .0115 = $6,900). Divide the annual tax by 12 to find the monthly payment ($6,900 ÷ 12 = $575).

11. C
Explanation: First, calculate the frontage of the owner's lot (17,550 square feet ÷ 150 foot depth = 117 foot frontage). Calculate the frontage of the neighboring lot (9,000 square feet ÷ 150 foot depth = 60 foot frontage). Add the two frontages to calculate the total frontage (117 feet + 60 feet = 177 feet).

12. B
Explanation: This question requires the calculation of a gross rent multiplier. Divide the sale price of the house across the street by its monthly rent to calculate the gross rent multiplier ($180,000 ÷ $1,200 = 150). Now multiply the subject property's monthly rent by the gross rent multiplier to calculate its value ($1,280 × 150 = $192,000).

13. C
Explanation: It can be helpful to plug hypothetical numbers into this problem. Let's say that she paid 80% of the listed price where the property was listed at $100,000 ($100,000 × .8 = $80,000). The difference between the listed price and sale price is $20,000 ($100,000 – $80,000 = $20,000). Divide the amount of profit she made on the deal by the amount she paid to calculate the percentage of profit ($20,000 ÷ $80,000 = .25).

14. B
Explanation: First, calculate the property's gross income ($3,000 × 12 months × 5 years = $180,000). Subtract the three months of vacancies ($3,000 × 3 months = $9,000)($180,000 – $9,000 = $171,000) and divide by 5 to determine the average income over five years ($171,000 ÷ 5 = $34,200). Now subtract the operating expenses to calculate the annual net income ($34,200 – $9,000 = $25,200). Divide the net income by the capitalization rate to find the value of the property ($25,200 ÷ .1 = $252,000).

15. B
Explanation: First, calculate what the annual amount of interest paid would be; you know the whole and the percentage, so use the formula W × % = P ($70,000 × .09 = $6,300). Divide this amount by 12 to see what the monthly payment is ($6,300 ÷ 12 = $525 per month). Divide $9,450 by the monthly payment to determine how many months elapsed ($9,450 ÷ $525 = 18 months).