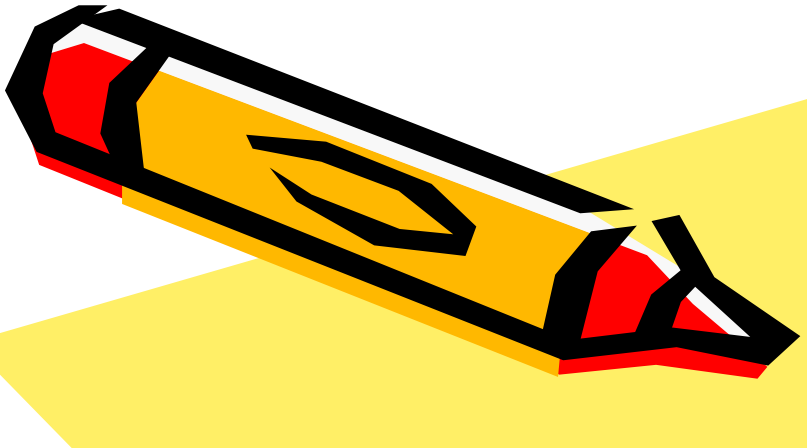


Math Review X

Seiler School of Real Estate

Rick Seiler

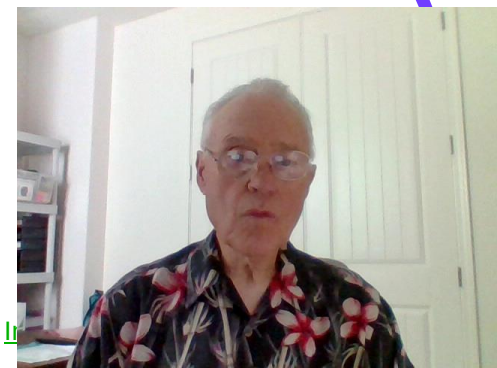
Instructor/Broker/Owner

1._____A 50 acre rectangular industrial site fronting on a highway is 1,000' deep. Assuming a sale price of $3,000 per acre, the price per front foot would be: (A.) $74.93 (B.) $3,443.52 (C.) $150.00 (D.) $68.87

Question #1 Solution

- 50 x 43,560 = 2,178,000 sq. ft.
- 2,178,000 / 1,000 = 2,178 front feet
- 50 Acres x $3,000. = $150,000
- $150,000 / 2,178 = **$68.87** = **D**

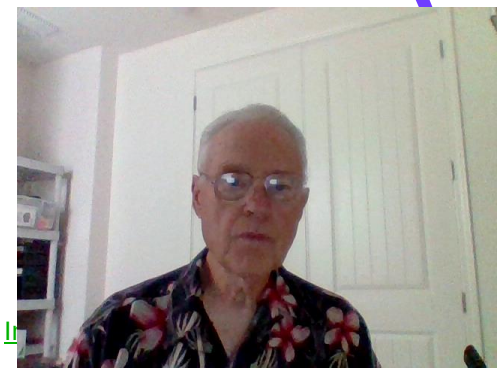
2._____A man willed his estate as follows: 54% to his wife, 18% to his daughter, 16% to his son and the remainder to Keahou Congregational Church. The church received $79,000. How much did the daughter receive? (A.) $658,333 (B.) $118,500 (C.) $355,500 (D.) $105,333



Question #2 - Solution

- 54% + 18% + 16% = 88%
- 100% - 88% = 12%
- $79,000. / 12% = $658,333.33
- $658,333.33 x 18% = **$118,500.** = **B**

3._____The net operating income of a property is $27,500. What is its listing value at a 11% capitalization rate? (A.) $250,000. (B.) $302,500. (C.) $222,500. (D.) $30,525.



Question #3 Solution

- $27,500 / 11% = **$250,000.** = ***A***

4._____A house under construction contains a rectangular basement that is 30 feet wide, 90 feet long, and is to be excavated to a uniform depth of 14 feet. A subcontractor received 25 cents per cubic yard for the excavating work. The subcontractor was paid..... (A.) $315 (B.) $1,050 (C.) $1,400 (D.) $350

Question #4 Solution

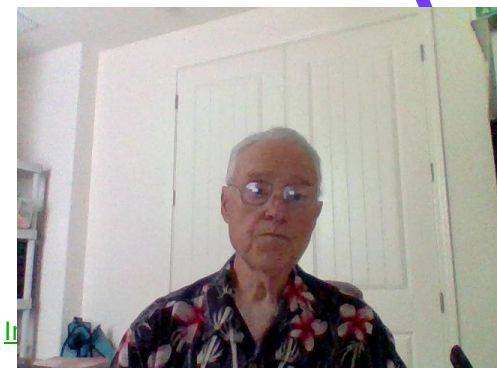
- 30 x 90 x 14 = 37,800 cubic feet
- Convert cubic feet to cubic yards
- 37,800 / 27 = 1,400 cubic yards
- 1,400 x .25 = **$350.** = **D**

5._____A lender will give 3/4% per month interest and 75% loan-to-value ration. What is the first month's interest payment on a property that sold for $80,000? (A.) $500 (B.) $375 (C.) $450 (D.) $600

Question #5 Solution

- $80,000. x 75% LTV = $60,000.
- $60,000. x .75% = **$450.** = ***C***

6._____A three year insurance policy that cost $144 was taken out by the seller four months and three days prior to closing. The policy, which was assumed by the buyer, would be shown as a: (A.) $127.60 seller credit (B.) $122.60 buyer credit (C.) $16.40 buyer credit (D.) $16.40 seller credit



Question #6 Solution

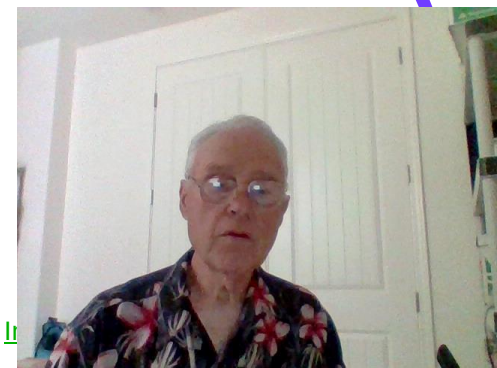
- $144.00 / 1,080 = $0.133 per day
- 4 months + 3 days = 123 days
- 1,080 – 123 =957 days remaining
- $0.133 x 957 days = **$127.56** = ***A***

7._____To leave the owner $90,000 after a six percent commission is paid, the list price would be: (A.) $96,000. (B.) $95,744.68 (C.) $95,905.66 (D.) $95,400.

Question #7 Solution

- 100% - 6% Commission = 94%
- $90,000. / 94% = **$95,744.68** = **B**

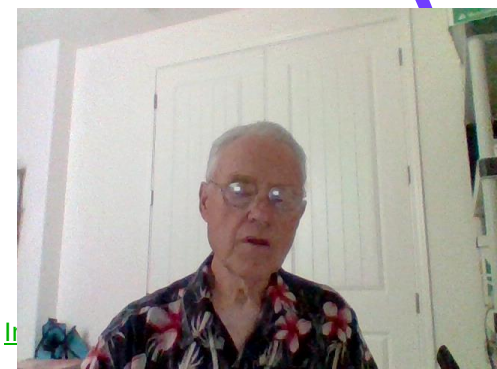
8._____If one month's interest paid on a mortgage is $200 and the principal balance is $30,000, what is the rate of interest?
(A.) 8% (B.) 7.25% (C.) 6.67% (D.) 6%



Question #8 Solution

- $200. x 12 months = $2,400.
- $2,400. / $30,000. = .08 = ***A***

9._____The current value of an 8-year-old building is $125,000. What was its original value if its rate of depreciation is 3% per year? (A.) $155,496 (B.) $522,500 (C.) $220,704 (D.) $165,000



Question #9 Solution

- 3% a year x 8 years = 24% Decrease
- 100% - 24% = 76% Current Value
- $125,000. / 76% = $164,473.68
- Closest Answer = **$165,000** = **D**

10._____The distance between the SE corner of section 13 of T3NR2E and the NW corner of section 30 of T2NR3E is the same county would be: (A.) 7 miles (B.) 12 miles (C.) 9 miles (D.) 14 miles

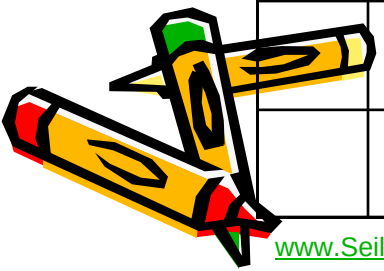
Question #10 Solution

					T3N R2E		
						T2N R3E	

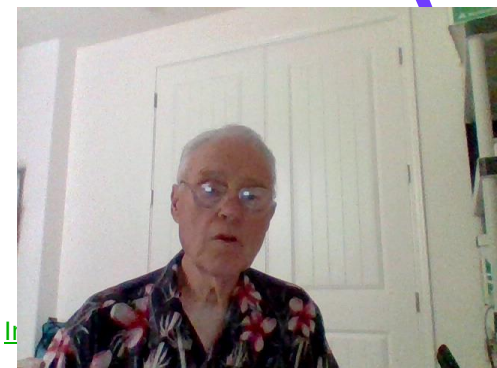
6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

Question #10

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36



11._____A fully rented ten-unit apartment building has rents of $500 per month. A ten percent rent increase brings a ten percent vacancy factor. The gross income: (A.) remains the same (B.) increases 9% (C.) decreases 1% (D.) increases 1%



Question #11 Solution

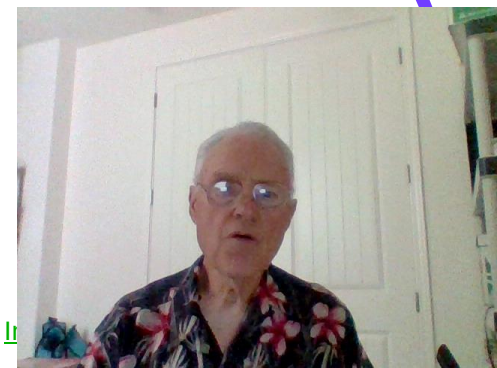
- 10 x $500. = $5,000.
- $500. x 10% rent increase = $50.
- $500. + $50. = $550.
- $550. x 10 = $5,500.
- $5,500 -10% vacancy = $4,950.
- $5,000. - $4,950 = $50.
- $50. / $5,000. = .01 decrease = ***C***

12._____A home in Paia has a market value of $72,500. The tax assessed value is 82% of the market value and the tax rate is $1.33 per $100 of assessed value. What will be the monthly payment for taxes? (A.) $67.71 (B.) $82.57 (C.) $812.50 (D.) $990.85

Question #12 Solution

- $72,500. x 82% = $59,450.
- $59,450. / 100 = 594.5
- 594.5 x $1.33 tax rate = $790.69
- $790.69 / 12 months = **$65.89** = ***A*** Closest Answer

13._____On February 1, a mortgagor makes a $638 payment on her mortgage, which is at the rate of 10%. The mortgagee allocates $500 to the payment of interest. What is the principal balance due on the mortgage on February 1? (A.) $95,700 (B.) $38,400 (C.) $60,000 (D.) $79,750



Question #13 Solution

- $500. x 12 Months = $6,000.
- $6,000. / 10% = **$60,000.** = ***C***

14._____If a shopping center had an annual rental of $50,000 and a total annual expenses of $5,000, and if you desired a net profit of 9 percent per annum, what would be the purchase price? (A.) $494,505 (B.) $490,500 (C.) $500,000 (D.) $555,000

Question #14 Solution

- $50,000. - $5,000. = $45,000.
- $45,000. / 9% = **$500,000.** = **C**

15._____One-sixtieth of a township is what percentage of a section? (A.) 166% (B.) 58% (C.) 62% (D.) 60%

Question #15 Solution

- There are 36 sections in a township.
- 36 / 60 = .60 = **60%** = **D**

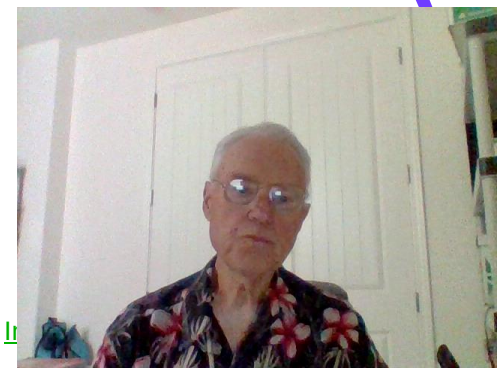
16._____An investor built an office building at a cost of $320,000 on land costing $40,000. Other site improvements totaled $20,000. What must be the amount of the annual net income from the property to return a profit to the owner at an annual rate of 12%? (A.) $31,666 (B.) $45,600 (C.) $43,200 (D.) $38,400

Question #16 Solution

- $320,000. + $40,000. + $20,000. = $380,000.

- $380,000. x 12% = **$45,600.** = **B**

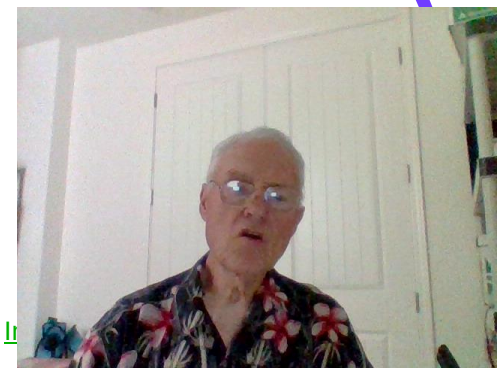
17._____An owner sold three houses in the country for an average price of $32,000. He made a profit of 12% on his original investment. What amount did he have invested in all three houses? (A.) $84,480.00 (B.) $96,000.00 (C.) $85,714.29 (D.) $28,571.43



Question #17 Solution

- $32,000. x 3 = $96,000.
- 100% + 12% profit = 112%
- $96,000. / 112% = **$85,714.29** = ***C***

18._____A broker negotiated the sale of the north east 1/4 of the north east 1/4 of the north east 1/4; section 25, township 2, south; range 1 east for $700 per acre. The listing agreement with the owner specified a 12% commission. How much did the broker earn? (A.) $480 (B.) $3,360 (C.) $840 (D.) $8,400



Question #18 Solution

- 640 Acres in a Section of Land
- 640 / 4 = 160
- 160 / 4 = 40
- 40 / 4 = 10 Acres
- $700. per Acre x 10 = $7,000.
- $7,000. x 12% = **$840.** = **C**

19._____An apartment has a gross income of $87,500. Annual expenses are depreciation, $8,500; principal payments, $7,200; interest on the loan, $26,800; taxes, $5,100; and other operating costs of $14,100. The annual cash flow is: (A.) $79,000 (B.) $34,300 (C.) $41,500 (D.) $25,800

Question #19 Solution

- $87,500. Gross Income
- Depreciation doesn't affect cash flow.
- $7,200. + $26,800. + $5,100 + $14,100. = $53,200.
- $87,500. - $53,200. = **$34,300.** = **B**

20._____A parcel of land measures 150 feet by 250 feet and sells for $10,000. What is the price per square foot? (A.) $0.53 (B.) $1.44 (C.) $0.27 (D.) $3.75

Question #20 Solution

- 150 x 250 = 37,500 Square Feet
- $10,000. / 37,500 = .27 = **C**

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