125 Real Estate Math Problems
SOLVED!

Sample Questions

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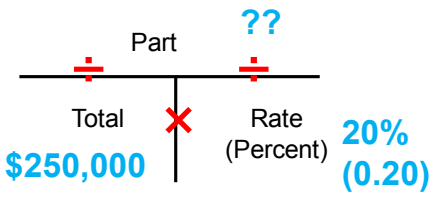
Question #12

Charles wants to buy a house for $250,000. If his bank requires a 20% downpayment, what will Charles' downpayment be?

Answer: Charles' downpayment is $50,000.

Explanation:



Part = Total x Rate
$250,000 x .2 = $50,000

Question #25

Sam Seller must walk away with at least $70,000 from the sale of his house. If he assumes that his costs will be 7% of the sales price, what is the mimimum sales price Sam should accept?

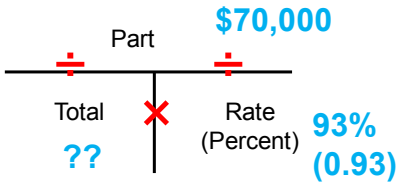
Answer: The minimum sales price that Sam should accept is $75,269.

Explanation:

Step 1.

% to Seller = 100% – % costs
100% - 7% = 93%

Step 2.



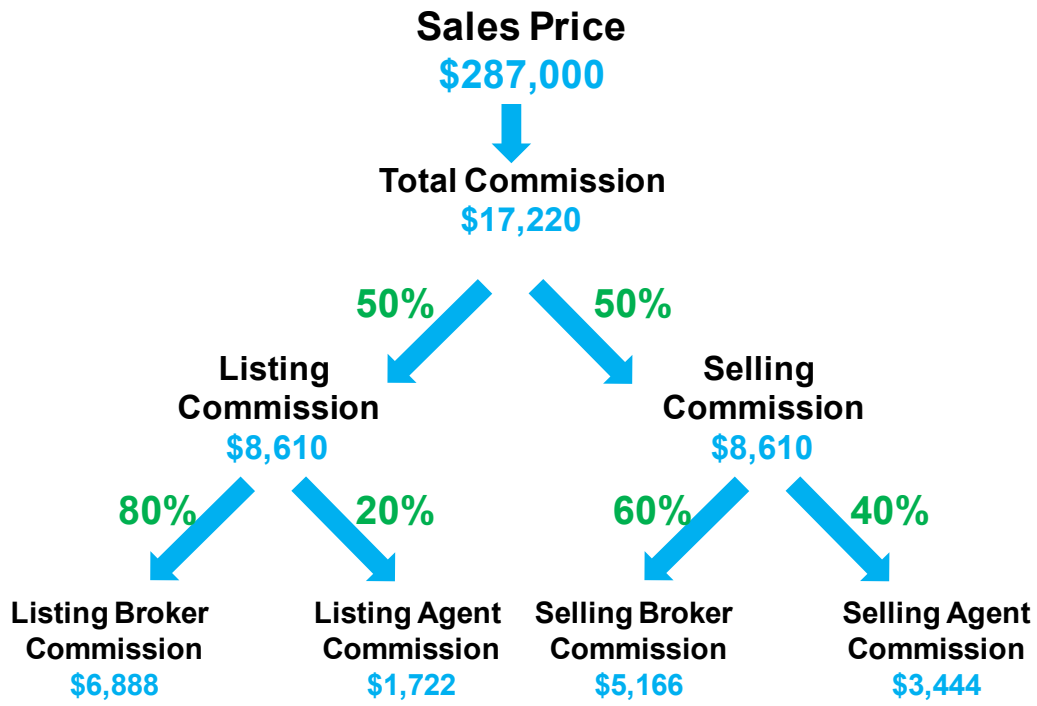
Total = Part / Rate
$70,000 / 0.93 = $75,269

Question #42

The commission structure charged by one of Broker Gene's listings was as follows: When the house sells, half of the 6% commission goes to Broker Gene, who gives 20% to the listing agent. The other half goes to the selling agent's brokerage, who gives 40% to the selling agent. If the sales price of the house was $287,000, calculate how much the Broker Gene, the listing agent, the selling broker, and the selling agent each receive.

Answer: Please see diagram below for each person's commission.

Explanation:



Question #60

Ken has an annual salary of $65,000. If his mortgage payment (PITI) is $395/month and he has an additional debt of $109/month. Calculate Ken's front and back end DTI ratios.

Answer: Ken's front end ratio is 0.07 and his back end ratio is 0.19.

Explanation:

Step 1.

Total Monthly Debt = $395 + $609 = $1004

Monthly Income = $65,000 / 12 months = $5,417

Step 2.

Front End Ratio = PITI / Monthly Income

$395 / $5,417 = 0.07

Step 3.

Back End Ratio = Total Debt / Monthly Income

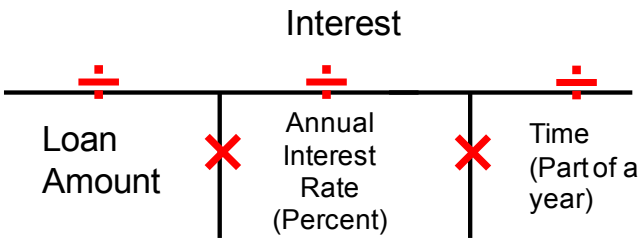
$1004 / $7,500 = 0.19

Question #69

What amount of interest does ABC Bank receive at the end of 3 years on a $273,000 loan at 5.5% interest?

Answer: The interest is $45,045.

Explanation:



Loan: $273,000
Interest Rate: 5.5% = 0.055
Time: 3 years

Interest = Loan x Interest Rate x Time

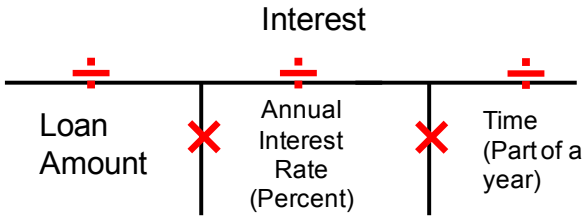
$273,000 x 0.055 x 3 = $45,045

Question #70

What amount of interest does ABC Bank receive after 2 months on a $75,000 loan at 3% interest?

Answer: The interest is $375.

Explanation:



Loan: $75,000
Interest Rate: 3% = 0.03
Time: 2 months = 0.167 years

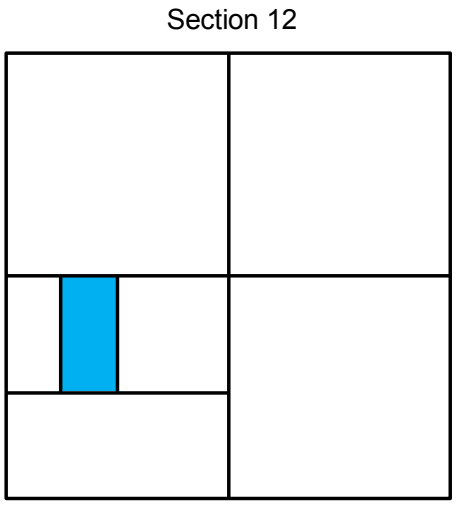
Interest = Loan x Interest Rate x Time
$75,000 x 0.03 x 0.167 = $375

Question #84

What is the legal description of the parcel in the figure below? How many acres is the parcel?

Answer: The legal description is E ½ NW ¼ SW ¼ of Section 12 and it is 20 acres.

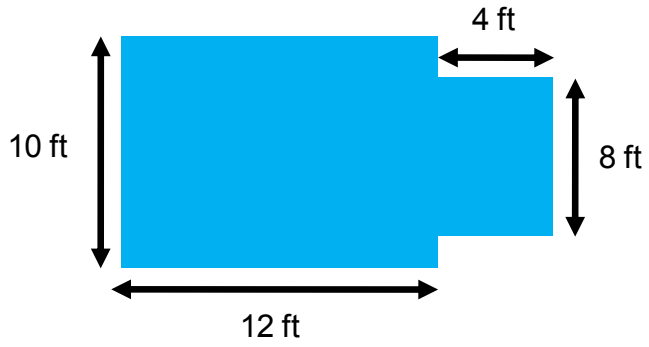
Explanation:



E ½ NW ¼ SW ¼ of Section 12
640 / 2 / 4 / 4 = 20 acres

Question #96

Mr. and Mrs. Johnson want to re-carpet their master bedroom, shown in the figure below. If it costs $2.50/sf for materials, and $11/sf for labor, calculate the total cost of the replacement.



Answer: The total cost is $2,052.

Explanation:

Step 1.

Area of Master Bedroom = 10 x 12 + 4 x 8 = 152 sf

Step 2.

Material Cost = $2.50 / sf x 152 sf = $380
Labor Cost = $11 / sf x 152 sf = $1,672
Total Cost = $380 + $1672 = $2,052

Question #112

Real estate agent Martin is estimating the value of a potential listing using the sales comparison approach. The subject property is a 3-bedroom home with a garage. He talks to his broker, who tells him that a garage normally adds $10,000 in value and a bedroom adds $25,000. Martin locates the following comparables:

- Comp 1: Sold for 159,900 - 4-bedroom home, no garage
- Comp 2: Sold for 135, 000 - 3 bedroom home, no garage
- Comp 3: Sold for 180,000 - 5-bedroom home, with garage

Calculate the adjusted sale price for all 3 comps. Based on these 3 comps, what is the estimated value of the subject property if all comps are weighed equally?

Answer: The estimated value of the subject property is $165,000.

Explanation:

Properties	Bedrooms	Garage	Sales Price	Adjustment	Adj. Price
Subject	3	Yes			$165,000
Comp 1	4	No	$159,000	-$10,000 +25,000	$174,000
Comp 2	3	No	$135,000	+25,000	$160,000
Comp 3	5	Yes	$180,000	-20,000	$160,000

Question #121

A property has a rental income of $1300 per month. If the closing date is June 20, how much rent is owed to the buyer at closing (use the 30 day method)?

Answer: Please see chart below.

Explanation:

30 days total

June 20
Closing

Rent per day = $1300 / 30 = $43.33
Rent owed to buyer = $43.33 x 10 = $433.30