



Principles 2

Math Help

1

The quarterly interest payment on a loan is \$3,900. The interest rate is 8%. What is the loan amount?



2

Broker Lily listed a property for \$310,000. She negotiated 6% total compensation offering half to the selling broker. Broker Suni sold the house for \$308,000. How much did Suni receive?



3

Zeke bought a tract of land that measures 1.6 miles by 700 feet. How many acres does Zeke have?

4

John purchased 87 acres of land. How many square feet of land does he have?



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Math Help

5

Lone Star Credit Union charges 2 discount points and 1% origination fee. What will be charged at closing on a \$195,000 loan?

6

Broker Oscar listed a house for \$295,000. He negotiated 5% total compensation and agreed to give 55% to the selling broker. Broker Ginger sold the house for \$291,000. How much did Ginger make?

7

The Franklin's property has an assessed value of \$297,000. If the tax rate is \$2.35 per hundred, how much are the annual taxes?

8

Janie bought a 4.5 acre tract of land. How many square feet of land does she have?



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Math Help

9

Broker Leo listed a property with total compensation of 5%. When the property sold, Leo's half of the commission was \$13,250. What was the sales price of the property?

10

A borrower has gross annual income of \$117,600 and recurring monthly debt payments of \$1,500. They found a home that has a monthly PITI payment of \$2,200. Using qualifying ratios of 28%/36% do they qualify?

11

Agent Fred sold a home listed by Broker Denise, who negotiated 6% compensation with the seller. The sales price was \$295,000. If Fred is on a 75% split with his broker, how much did Fred make?



Principles 2

Math Rationale

1

The quarterly interest payment on a loan is \$3,900. The interest rate is 8%. What is the loan amount?

$$\frac{\$3,900 \times 4 \text{ quarters} = \$15,600}{8\%} = \mathbf{\$195,000}$$

2

Broker Lily listed a property for \$310,000. She negotiated 6% total compensation offering half to the selling broker. Broker Suni sold the house for \$308,000. How much did Suni receive?

$$\frac{\mathbf{\$9,240}}{3\%} = \$308,000$$

3

Zeke bought a tract of land that measures 1.6 miles by 700 feet. How many acres does Zeke have?

$$\begin{aligned} 5,280 \text{ ft} \times 1.6 \text{ miles} &= 8,448 \text{ ft} \\ 8,448 \text{ ft} \times 700 \text{ ft} &= 5,913,600 \text{ sf} \\ 5,913,600 \text{ sf} / 43,560 \text{ sf} &= \mathbf{135.76 \text{ acres}} \end{aligned}$$

4

John purchased 87 acres of land. How many square feet of land does he have?

$$87 \text{ acres} \times 43,560 \text{ sf} = \mathbf{3,789,720 \text{ sf}}$$



Principles 2

Math Rationale

5

Lone Star Credit Union charges 2 discount points and 1% origination fee. What will be charged at closing on a \$195,000 loan?

\$5,850

$2 + 1 = 3\%$

$\$195,000$

6

Broker Oscar listed a house for \$295,000. He negotiated 5% total compensation and has agreed to give 55% to the selling broker. Broker Ginger sold the house for \$291,000. How much did Ginger make?

$\$14,550$

$\$8,002.50$

5%

$\$291,000$

55%

$\$14,550$

7

The Franklin's property has an assessed value of \$297,000. If the tax rate is \$2.35 per hundred, how much are the annual taxes?

Convert \$2.35 to a decimal

$$.0235 \times \$297,000 = \mathbf{\$6,979.50}$$

-OR-

$$\$297,000 / 100 = 2,970$$

$$2,970 \times \$2.35 = \mathbf{\$6,979.50}$$

8

Janie bought a 4.5 acre tract of land. How many square feet of land does she have?

$$4.5 \text{ acres} \times 43,560 \text{ sf} = \mathbf{196,020 \text{ sf}}$$



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Math Rationale

9

Broker Leo listed a property with total compensation of 5%. When the property sold, Leo's half of the commission was \$13,250. What was the sales price of the property?

$$\$13,250 \times 2 = \$26,500$$

5%

\$530,000

10

A borrower has gross annual income of \$117,600 and recurring monthly debt payments of \$1,500. They found a home that has a monthly PITI payment of \$2,200. Using qualifying ratios of 28%/36% do they qualify?

$$\$117,600 / 12 \text{ months} = \$9,800$$

$$\$9,800 \times 28\% = \$2,744$$

$$\$9,800 \times 36\% = \$3,528$$

$$\$3,528 - \$1,500 \text{ debt} = \$2,028$$

No, because of the back ratio.

11

Agent Fred sold a home listed by Broker Denise, who negotiated 6% compensation with the seller. The sales price was \$295,000. If Fred is on a 75% split with his broker, how much did Fred make?

$$\$17,700 / 2 = \$8,850$$

6%

\$295,000

\$6,637.50

75%

\$8,850