LESSON MAKER PRO

# Home Payment Choices

*Estimate mortgage payments and compare the cost of renting and buying.*

**HIGH SCHOOL · MM.FPM.A.7**

**MM.FPM.A.7** "Compare and contrast housing finance options including renting, leasing to purchase, purchasing with a mortgage, and purchasing with cash. a. Research and evaluate various mortgage products available to consumers. b..."

NAME _____ DATE _____

## THE PAYMENT RULE

Subtract the down payment from the home price to find the loan amount. For an estimated monthly principal-and-interest payment, divide the loan by $1,000, then multiply by the quoted payment per $1,000. These rounded quotes do not include taxes, insurance, or fees.

## WORKED EXAMPLE

A home costs $175,000. The buyer puts down $25,000. Estimate the monthly principal-and-interest payment using this quote.

### MORTGAGE QUOTE

| Product | Monthly payment per $1,000 borrowed |
|---|---|
| 20-year fixed, 4% | $6.06 |

1. Loan: $175,000 - $25,000 = $150,000.
2. Units of $1,000 borrowed: $150,000 / $1,000 = 150.
3. Monthly estimate: 150 × $6.06 = $909.

**Answer: About $909 per month.**

## PRACTICE 4 problems

**1** A home costs $120,000. You put down $20,000. At $6.00 per $1,000 borrowed each month, what is the estimated monthly payment?

**ANSWER** _____

**2** You borrow $100,000 with a 15-year fixed mortgage at 5%. The quote is $7.91 per $1,000 borrowed each month. Estimate the monthly payment.

**ANSWER** _____

**3** For an $80,000 loan, one 30-year quote is $6.00 per $1,000 each month; another is $6.65. How much higher is the second estimated monthly payment?

**ANSWER** _____

**4** A $160,000 home has a 10% down payment. At $6.00 per $1,000 borrowed each month, estimate the monthly payment.

**ANSWER** _____

## APPLY IT Show your work

**1** You and a friend plan to buy a $250,000 home after graduation. You can put down $50,000. Use the quotes to find both estimated monthly payments. Which product costs less per month, and by how much?

**FIXED-RATE MORTGAGE QUOTES**

| Product | Monthly payment per $1,000 borrowed |
|---|---|
| 30-year fixed, 6% | $6.00 |
| 15-year fixed, 5% | $7.91 |

**ANSWER** _____

**2** You are moving near a new job. A $240,000 home needs a $40,000 down payment. Its mortgage quote is $6.00 per $1,000 borrowed each month, plus $200 monthly for taxes and insurance. Rent is $1,050 a month. How much less does renting cost each month?

WORK SPACE

**ANSWER** _____

## CHALLENGE One step up

Use the $350 monthly rent savings and $40,000 down payment from the last problem. After 24 months, the home could sell for $260,000, with $190,000 still owed. The renter invests the down payment and monthly savings. Assume a 10% total gain on all contributions by then, and ignore selling costs. Who has more wealth, and by how much?

WORK SPACE AND ANSWER

ANSWER KEY

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## PART 1 · PRACTICE

| # | PROBLEM | ANSWER |
|---|---|---|
| 1 | A home costs $120,000. You put down $20,000. At $6.00 per $1,000 borrowed each month, what is the estimated monthly payment? | **About $600 per month.** |
| 2 | You borrow $100,000 with a 15-year fixed mortgage at 5%. The quote is $7.91 per $1,000 borrowed each month. Estimate the monthly payment. | **About $791 per month.** |
| 3 | For an $80,000 loan, one 30-year quote is $6.00 per $1,000 each month; another is $6.65. How much higher is the second estimated monthly payment? | **About $52 per month.** |
| 4 | A $160,000 home has a 10% down payment. At $6.00 per $1,000 borrowed each month, estimate the monthly payment. | **About $864 per month.** |

## PART 2 · APPLY IT

1. **30-year: about $1,200 per month. 15-year: about $1,582 per month. The 30-year product costs about $382 less per month.** The loan is $200,000, or 200 units of $1,000. Multiply each quote by 200, then subtract the payments.
2. **$350 less per month.** The $200,000 loan has an estimated $1,200 monthly mortgage payment. Buying costs $1,400 per month including taxes and insurance, which is $350 more than rent.

## CHALLENGE

**The buyer has $70,000 in home equity. The renter's investment is worth ($40,000 + 24 × $350) × 1.10 = $53,240. The buyer has $16,760 more.**

Accept payments labeled as estimates because the quoted payment factors are rounded. For the challenge, compare home equity with the renter's investment value, not the home's full resale price.