LESSON MAKER PRO

# Compare the Quotes

*Find the cost behind the monthly payment.*

**HIGH SCHOOL · MM.FPM.A.7.a**

**MM.FPM.A.7.a** "Research and evaluate various mortgage products available to consumers."

NAME _____ DATE _____

## COMPARE TOTAL COSTS

For the same time period, multiply each mortgage payment by the number of months, then add upfront fees. An adjustable-rate mortgage, or ARM, can change after its introductory period, so later payments may be uncertain.

## WORKED EXAMPLE

Which quote costs less over 24 months, and by how much?

**MORTGAGE QUOTES**

| Product | Monthly payment | Upfront fees |
|---|---|---|
| Fixed-rate | $1,430 | $2,600 |
| ARM, 24-month intro | $1,390 | $3,800 |

1. Fixed-rate: 24 × $1,430 + $2,600 = $36,920.
2. ARM: 24 × $1,390 + $3,800 = $37,160.
3. Difference: $37,160 − $36,920 = $240.

**Answer: The fixed-rate quote costs $240 less.**

## PRACTICE 4 problems

**1** A fixed-rate mortgage costs $1,200 per month plus $900 in upfront fees. What is its cost over 12 months?

**ANSWER** _____

**2** An ARM costs $1,100 per month for its first 36 months, plus $1,500 in upfront fees. What is its cost for those 36 months?

**ANSWER** _____

**3** Over 48 months, Quote A costs $1,050 per month plus $2,000 in fees. Quote B costs $1,100 per month plus $500 in fees. Which costs less, and by how much?

**ANSWER** _____

**4** One quote costs $1,150 per month plus $2,400 in fees. Another costs $1,200 per month plus $600 in fees. After how many months are their total costs equal?

**ANSWER** _____

## APPLY IT Show your work

**1** Your older sibling is buying a condo and expects to move in 36 months. Which mortgage quote costs less during that time, and by how much?

**CONDO MORTGAGE QUOTES**

| Product | Monthly payment | Upfront fees |
|---|---|---|
| Fixed-rate | $1,600 | $2,000 |
| ARM, 36-month intro | $1,550 | $3,000 |

**ANSWER** _____

**2** Your family expects to keep its home for 48 more months. Fixed-rate Quote A costs $1,700 per month plus $4,000 in fees. Fixed-rate Quote B costs $1,750 per month plus $1,000 in fees. Which costs less over that time, and by how much?

WORK SPACE

**ANSWER** _____

## CHALLENGE One step up

Over 72 months, a fixed-rate mortgage costs $1,400 per month plus $2,000 in fees. An ARM costs $1,300 per month for 36 months, then an estimated $1,500 per month for 36 months, plus $1,000 in fees. Which has the lower estimated cost, by how much, and why is the ARM total uncertain?

WORK SPACE AND ANSWER

ANSWER KEY

# Compare the Quotes

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## PART 1 · PRACTICE

| # | PROBLEM | ANSWER |
|---|---|---|
| 1 | A fixed-rate mortgage costs $1,200 per month plus $900 in upfront fees. What is its cost over 12 months? | **$15,300** |
| 2 | An ARM costs $1,100 per month for its first 36 months, plus $1,500 in upfront fees. What is its cost for those 36 months? | **$41,100** |
| 3 | Over 48 months, Quote A costs $1,050 per month plus $2,000 in fees. Quote B costs $1,100 per month plus $500 in fees. Which costs less, and by how much? | **Quote A costs $900 less.** |
| 4 | One quote costs $1,150 per month plus $2,400 in fees. Another costs $1,200 per month plus $600 in fees. After how many months are their total costs equal? | **36 months** |

## PART 2 · APPLY IT

1. **The ARM costs $800 less over 36 months.** The fixed-rate cost is 36 × $1,600 + $2,000 = $59,600. The ARM cost is 36 × $1,550 + $3,000 = $58,800.
2. **Quote B costs $600 less.** Quote A costs 48 × $1,700 + $4,000 = $85,600. Quote B costs 48 × $1,750 + $1,000 = $85,000.

## CHALLENGE

**The ARM's estimated cost is $101,800, which is $1,000 less than the fixed-rate cost of $102,800. The ARM total is uncertain because its payment after the first 36 months may differ from the estimate.**

Accept equivalent calculations that include upfront fees. For the challenge, students must treat the ARM's later payment as an estimate, not a guaranteed amount.