

## Refinancing to Save Money on Interest Rates Case Study Instructions

### Overview

Participants help the Johnsons determine if refinancing for a lower rate makes sense based on their financial situation. The objective is to teach participants about calculating someone's break-even point to determine whether or not it makes sense for that person to refinance for a lower rate so that they will know how to do it for themselves.

### Time

30–40 minutes

### Materials

- Written copies of the case study for all participants
- Paper and pencils for all participants
- Calculators
- Overhead transparencies with completed worksheet for refinancing to save money on interest rates
- Transparency markers

### Set Up

- Make enough copies of the three-page case study for all participants.
- Print completed "Worksheet for Refinancing to Save Money on Interest Rates" onto an overhead transparency.

### Activity

- Distribute copies of the case study to participants and ask them to divide up into small groups.
- Read the case study aloud.
- Give the groups 10–15 minutes to pretend that they know the Johnsons and are helping them determine whether or not refinancing for a lower rate makes sense based on their financial situation. Ask groups to complete the worksheet for refinancing to save money on interest rates based on the information in the case study.
- Bring the group back together and share the completed worksheet for refinancing to save money on interest rates with the class using an overhead projector.

### Debriefing

Do you now feel ready to calculate your break-even point and determine if and how refinancing for a lower rate makes sense for you? Why or why not?

## Refinancing to Save Money on Interest Rates Case Study

Now that we have covered all the basic information you need to know to calculate your break-even point, you are ready to help the Johnson family figure out whether or not it makes sense for them to refinance for a lower rate based on their financial situation. Read the following information and determine whether it makes sense for them to refinance for a lower rate by using the worksheet for refinancing to save money on interest rates and 2005 tax rate schedule.

### Personal Information

Jack and Amy Johnson live in a three-bedroom home with their children, Kate and Alex. They bought their home three years ago with a \$200,000, 30-year, fixed-rate mortgage at a 7 percent interest rate. Their loan does not have a prepayment penalty. They are interested in refinancing for a lower rate, but they don't know where to begin.

Perhaps you can help them get started by calculating their break-even point. The Johnsons checked their current lender for the refinancing rate and terms being offered to them. The loan offered was a **5.5 percent interest rate for another 30-year fixed-rate loan**. They plan on staying in this home for at least another three years.

Prospective borrowers:	Jack and Amy Johnson
Combined annual income:	\$60,000
Savings:	\$2,000
Debts (other than the mortgage):	\$400/month

Current monthly principal and interest payment: .....	\$1,332
Current loan balance: .....	\$193,000
New monthly principal and interest payment: .....	\$1,096
Closing costs for new loan: .....	\$3,000

## Worksheet for Refinancing to Save Money on Interest Rates

Costs	Current Mortgage	Refinance Loan
A. Loan amount	1.	2.
B. Interest rate	1.	2.
C. Monthly principal and interest payment amount	1.	2.
D. Tax rate (see next page for 2005 tax rate schedules)	1.	2.
E. After-tax payment amount [C x (1-D)]	1.	2.
F. Difference in after-tax payment amounts (E1-E2)		2.
G. Total closing costs		2.
H. Months to break even (G2 ÷ F2)		2.
I. How long you plan to stay in your home in months (years x 12)		2.
J. Total savings (F2 x I2)		

## 2005 Tax Rate Schedule

### Filing Status: Single

Income Range	Tax Rate
\$0 to \$7,300	10%
\$7,300 to \$29,700	15%
\$29,700 to \$71,950	25%
\$71,950 to \$150,150	28%
\$150,150 to \$326,450	33%
\$326,450 to no limit	35%

### Filing Status: Married Filing Jointly or Qualifying Widow(er)

Income Range	Tax Rate
\$0 to \$14,600	10%
\$14,600 to \$59,400	15%
\$59,400 to \$119,950	25%
\$119,950 to \$182,800	28%
\$182,800 to \$326,450	33%
\$326,450 to no limit	35%

### Filing Status: Married Filing Separately

Income Range	Tax Rate
\$0 to \$7,300	10%
\$7,300 to \$29,700	15%
\$29,700 to \$59,975	25%
\$59,975 to \$91,400	28%
\$91,400 to \$163,225	33%
\$163,225 to no limit	35%

### Filing Status: Head of Household

Income Range	Tax Rate
\$0 to \$10,450	10%
\$10,450 to \$39,800	15%
\$39,800 to \$102,800	25%
\$102,800 to \$166,450	28%
\$166,450 to \$326,450	33%
\$326,450 to no limit	35%

**Worksheet for Refinancing to Save Money on Interest Rates —  
Answer Key**

<b>Costs</b>	<b>Current Mortgage</b>	<b>Refinance Loan</b>
A. Loan amount	1. <b>\$200,000</b>	2. <b>\$193,000</b>
B. Interest rate	1. <b>7%</b>	2. <b>5.5%</b>
C. Monthly principal and interest payment amount	1. <b>\$1,332</b>	2. <b>\$1,096</b>
D. Tax rate	1. <b>0.25</b>	2. <b>0.25</b>
E. After-tax payment amount [C X (1-D)]	1. <b>\$999</b>	2. <b>\$822</b>
F. Difference in after-tax payment amounts (E1-E2)		2. <b>\$177</b>
G. Total closing costs		2. <b>\$3,000</b>
H. Months to break even (G2 ÷ F2)		2. <b>17</b>
I. How long you plan to stay in your home in months (years X 12)		2. <b>36</b>
J. Total savings (F2 X I2)		<b>\$6,372</b>