Activity 2

UNDERSTANDING AMORTIZATION

The Chen family has decided to purchase a home for $150,000. They currently have $30,000 in savings, but they are only willing to make a down payment of $25,000. In order for them to buy the home, a bank must agree to give the Chens a loan for $125,000. Use this information to calculate the following:

1. What percentage of the home's purchase price does their down payment represent? ____________%
2. Do you think it is a good idea for the Chens to make this size down payment? Why or why not?

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To better understand how mortgages work, create an amortization schedule using the online calculator at mortgagecalculator.org. First, click the "Show Amortization Tables" link at the bottom of the calculator and check only the box for "Show monthly amortization table." Then input the Chens' home cost and down payment. Assume they will have a 30-year fixed-rate mortgage with an 8% interest rate. Input zeros for the remaining items in the calculator, then click the "Calculate" button. Scroll down the webpage to see the monthly amortization schedule, which will start off like the one shown here.

MONTH	MONTHLY PAYMENT	INTEREST	PRINCIPAL	BALANCE
1	$917.20	$833.33	$83.87	$124,916.13
2	$917.20	$832.77	$84.43	$124,831.70
3	$917.20	$832.21	$84.99	$124,746.70
4	$917.20	$831.64	$85.56	$124,661.14

Use the amortization schedule and the mortgage summary information to answer the following questions.

3. What happens to the interest and principal amounts over the course of the mortgage?

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4. What is the total cost of the home after the mortgage has been paid off? Don't forget to include the $25,000 down payment in the total cost. $____________
5. What do you think would happen to this total cost if the Chens paid an extra $100 each month to reduce the principal? Why?

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6. What would happen if the Chens took a 30-year adjustable rate mortgage with a 4% interest rate that increases by .25% after the first year, with expected subsequent increases of .25% per year up to a maximum interest rate of 8%. Use the calculator at www.mortgagecalculator.org/calcs/fixed-vs-arm.php to compare this adjustable rate mortgage with the fixed rate mortgage described above. (Input zeros for the remaining items in the calculator.)

   a. What happens to the monthly payments over the course of the adjustable rate mortgage?

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   b. What is the total cost of the home after the adjustable rate mortgage has been paid? $____________

7. If you had the choice, would you select a fixed rate or adjustable rate mortgage? Why?

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8. Now suppose that the Chens decide to refinance their fixed rate mortgage after 5 years. Their new 30-year mortgage has a 6.5% fixed interest rate, with closing costs of $2,000. Use the calculator at www.mortgagecalculator.org/calculators/should-i-refinance.php to find out how refinancing will change their mortgage costs. (Input zeros for any information not provided above.)

   a. What is the Chens' monthly mortgage payment after refinancing? $____________

   b. What will be their total savings after their new mortgage has been paid off? $____________