

Name: _____

Date: _____

Activity 2: The Amortization Formula and the Price of Your Car

$$A = \frac{i \times P \times (1 + i)^n}{(1 + i)^n - 1}$$

1. Calculate the monthly payment and total cost of a car with the following information:

Principal (cost of car): \$15,500

Annual interest rate: 2.0% compounded monthly

Loan term: 5 years (60 months)

$$A = \frac{.02/12 \times \$15,500 \times (1 + .02/12)^{60}}{(1 + .02/12)^{60} - 1}$$

Monthly payment _____

Total cost of the car _____

2. Calculate the monthly payment and total cost of a car with the following information:

Principal (cost of car): \$30,000

Annual interest rate: 4.7% compounded monthly

Loan term: 6 years (72 months)

Monthly payment _____

Total cost of the car _____

3. Calculate the monthly payment and total cost of YOUR car purchase with the following information:

Principal (cost of car): \$20,000

Annual interest rate: _____ compounded monthly

Loan term: 5 years (60 months)

Monthly payment _____

Total cost of the car _____

4. Calculate the monthly payment and total cost of YOUR car purchase with the following information:

Principal (you select car): _____

Annual interest rate: _____ (use second survey)

Loan term: 5 years (60 months)

Monthly payment _____

Total cost of the car _____