

MATH 210 FINITE MATHEMATICS

BRIAN VEITCH • FALL 2016 • NORTHERN ILLINOIS UNIVERSITY

5.3 Amortization and Sinking Funds

Definition 1: Amortization Formula

The periodic payment R on a loan of P dollars to be amortized over n periods with interest charged at the rate of i per period is

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Example 1

A car dealership offers 2.5% financing over a 5 year loan period for a car priced at \$10,000. The other option is a \$700 rebate but you must finance at 4% over 5 years. Which option is better?

Example 2

Mike purchased a house for \$200,000, put down 10%, and financed the remaining balance with a 5% interest over 30 years. What should the monthly mortgage payment be? How much did Mike pay in interest?

Example 3

Brian needs to save \$150,000 to pay off a debt in 10 years. He will pay monthly payments into an account earning 4% compounded quarterly. What size payment should he make?