

- 1) Sandy wants to borrow \$12,000 to purchase a used car. After looking at her budget, she realizes she can only afford to make payments of \$250. The bank is offering her a loan at 7.5%. What should be the length of her loan so she is able to keep her payments within her budget? Use the formula below and round your answer to the nearest tenth of a year.

$$t = \frac{\ln\left(\frac{M}{p}\right) - \ln\left(\frac{M}{p} - \frac{r}{12}\right)}{12 \ln\left(1 + \frac{r}{12}\right)}$$

- 2) In question 1, what impact would an increase in the monthly payment of \$50 have on the length of the loan?

Answers

- 1) 4.8 years.
2) The length of the loan would be reduced to 3.8 years.