

As with Mortgages, determining an amortization rate for a loan can be difficult. Most financing companies use special computer programs or special calculators to determine the amortization rate. They could also use a table like the table stub below:

Personal Loan Payment Calculator					
Monthly Payment Per \$1000 (Principal + Interest)					
Interest Rate %	Term in Years				
	1	2	3	4	5
3.50	84.92	43.20	29.30	22.36	18.19
3.75	85.04	43.31	29.41	22.47	18.30
4.00	85.23	43.47	29.58	22.66	18.52
4.25	85.34	43.58	29.69	22.77	18.63
4.50	85.45	43.69	29.80	22.88	18.74
4.75	85.56	43.80	29.91	22.99	18.85
5.00	85.67	43.91	30.02	23.10	18.96
5.25	85.78	44.02	30.13	23.21	19.07
5.50	85.89	44.13	30.24	23.32	19.18

This table works just like the mortgage table from Unit 1, but you may notice that the years available for the term are lower. Car loans are typically paid off in 1-7 years – not 25 years like some mortgages!

Example 3: Determining Amortization Rate

Priya is looking to borrow money to buy a used car. She needs to borrow \$5 700. Her bank offers her a car loan at 5.25% interest for 3 years.

a) Determine the amortization rate for this loan and write it here: \$30.13 per 1000

b) Determine Priya's monthly loan payment.

$$\begin{aligned} \text{monthly loan payment} &= \text{Loan} \times \text{amortization rate} \\ &= 5700 \times \frac{30.13}{1000} \\ &= \boxed{\$171.74} \end{aligned}$$

c) Determine the total amount of interest that Priya will pay to the bank.

$$\text{Interest Paid} = \text{Amount paid to the Bank} - \text{Amount Borrowed from Bank}$$

$$= (171.74 \times 12 \times 3) - 5700$$

$$= 6182.64 - 5700$$

Interest

$$= \boxed{\$482.64}$$