



calculatoratoz.com



unitsconverters.com

Loan Formulas

Calculators!

Examples!

Conversions!

Bookmark calculatoratoz.com, unitsconverters.com

Widest Coverage of Calculators and Growing - **30,000+ Calculators!**
Calculate With a Different Unit for Each Variable - **In built Unit Conversion!**
Widest Collection of Measurements and Units - **250+ Measurements!**

Feel free to SHARE this document with your friends!

[Please leave your feedback here...](#)



List of 7 Loan Formulas

Loan

1) EMI

$$\text{fx } \text{EMI} = \text{LA} \cdot \text{R} \cdot \left(\frac{(1 + \text{R})^{\text{CP}}}{(1 + \text{R})^{\text{CP}} - 1} \right)$$

[Open Calculator !\[\]\(a870788d6ed9b8fd294b7654a8c8526b_img.jpg\)](#)

$$\text{ex } 4770.455 = 20000 \cdot .2 \cdot \left(\frac{(1 + .2)^{10}}{(1 + .2)^{10} - 1} \right)$$

2) EMI of Car Loan

fx
[Open Calculator !\[\]\(c50c8b7b2cc2cf9ff925edec0ee94c0d_img.jpg\)](#)

$$\text{MP}_{\text{loan}} = \text{P}_{\text{CL}} \cdot \left(\frac{\text{R}}{12 \cdot 100} \right) \cdot \left(1 + \left(\frac{\text{R}}{12 \cdot 100} \right) \right)^n - \frac{\text{m}}{\left(1 + \left(\frac{\text{R}}{12 \cdot 100} \right) \right)^n - \{m\} - 1}$$

$$\text{ex } 16730.63 = 750000 \cdot \left(\frac{.2}{12 \cdot 100} \right) \cdot \frac{\left(1 + \left(\frac{.2}{12 \cdot 100} \right) \right)^{45}}{\left(1 + \left(\frac{.2}{12 \cdot 100} \right) \right)^{45} - 1}$$

3) Loan Amount

$$\text{fx } \text{LA} = \left(\frac{\text{PMT}}{\text{R}} \right) \cdot \left(1 - \left(\frac{1}{(1 + \text{R})^{\text{CP}}} \right) \right)$$

[Open Calculator !\[\]\(f1c5da15572e3e09d343161be98f508d_img.jpg\)](#)

$$\text{ex } 19704.62 = \left(\frac{4700}{.2} \right) \cdot \left(1 - \left(\frac{1}{(1 + .2)^{10}} \right) \right)$$



4) Remaining Loan Balance

fx

Open Calculator 

$$FV_L = PV_L \cdot (1 + r_p)^n - \{PYr\} - TP \cdot \left(\frac{(1 + r_p)^n - \{PYr\} - 1}{r_p} \right)$$

ex

$$806400 = 10000 \cdot (1 + 2)^4 - 90 \cdot \left(\frac{(1 + 2)^4 - 1}{2} \right)$$

Loan Repayment

5) Loan Amortization

fx

Open Calculator 

$$P = \frac{roi \cdot P}{MP_{Year} \cdot \left(1 - \left(1 + \frac{roi}{MP_{Year}} \right)^{-MP_{Year} \cdot T} \right)}$$

ex

$$32267.19 = \frac{0.1 \cdot 1000000}{12 \cdot \left(1 - \left(1 + \frac{0.1}{12} \right)^{-12 \cdot 3} \right)}$$

6) Monthly Payment

fx

Open Calculator 

$$P = LA \cdot \left(\frac{R \cdot (1 + R)^{CP}}{(1 + R)^{CP} - 1} \right)$$

ex

$$4770.455 = 20000 \cdot \left(\frac{.2 \cdot (1 + .2)^{10}}{(1 + .2)^{10} - 1} \right)$$

7) Number of Months

fx

Open Calculator 

$$n = \log_{10} \frac{\frac{\frac{P}{R}}{\left(\frac{P}{R}\right) - LA}}{\log_{10} (1 + R)}$$

ex

$$0.845488 = \log_{10} \frac{\frac{28000}{.2}}{\left(\frac{28000}{.2}\right) - 20000} (1 + .2)$$



Variables Used

- **CP** Compounding Periods
- **EMI** Equated Monthly Installment
- **FV_L** Future Value of Loan Amount
- **LA** Loan Amount
- **MP_{loan}** Monthly Payment of Car Loan
- **MP_{Year}** Monthly Payments in Year
- **n** Number of Months
- **n_m** Months
- **n_{PYr}** Number of Payments Per Year
- **p** Monthly Payment
- **P** Principal Loan Amount
- **P_{CL}** Principal Car Loan Amount
- **PMT** Annuity Payment
- **PV_L** Loan Principal
- **R** Interest Rate
- **r_p** Rate per Payment
- **roi** Rate of Interest
- **T** Time in terms of year
- **TP** Total Payments












Constants, Functions, Measurements used

- **Function:** \log_{10} , $\log_{10}(\text{Number})$

The common logarithm, also known as the base-10 logarithm or the decimal logarithm, is a mathematical function that is the inverse of the exponential function.



Check other formula lists

- [Banking Formulas](#) 
- [Equity Formulas](#) 
- [Financial Institutions Management Formulas](#) 
- [Fixed Income Securities Formulas](#) 
- [Investment Banking Formulas](#) 
- [Loan Formulas](#) 
- [Mergers and Acquisitions Formulas](#) 
- [Public Finance Formulas](#) 
- [Tax Formulas](#) 

Feel free to SHARE this document with your friends!

PDF Available in

[English](#) [Spanish](#) [French](#) [German](#) [Russian](#) [Italian](#) [Portuguese](#) [Polish](#) [Dutch](#)

6/11/2024 | 9:53:48 AM UTC

[Please leave your feedback here...](#)

