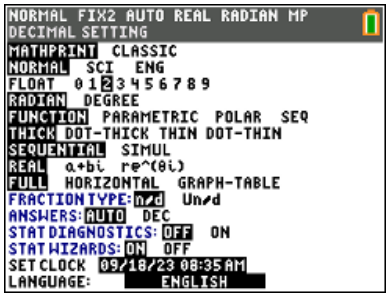
Graphing an Outstanding Loan Balance - TI-84 Plus CE

Example – Home Loan

You purchase a home for $250,000, pay 20% down, and have a 30-year mortgage for the balance. What is the monthly payment if the interest rate for the loan is 7.9%?

Graph the loan balance over the life of the loan.

1. Press [mode] and change the DECIMAL SETTING to **FIX2** to round computations to two decimal places.

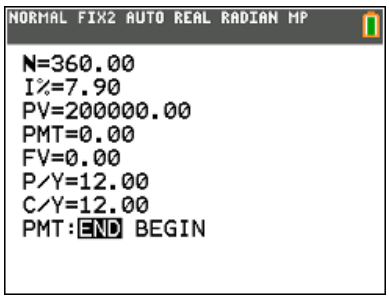


2. Press [apps] and select **Finance**. Press [enter] to select **TVM Solver** from the CALC menu.

3. Enter the values as shown.

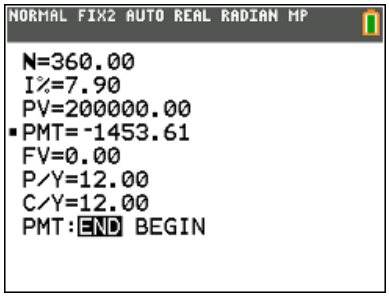
   For PV, enter either 250000 [−] 0.2 [×] 250000 or 200000. This represents the amount of the loan, $250,000, minus the 20% down payment.

   Note that N is 360 because there are 12 payments per year for 30 years. PV is entered as a positive number because the $200,000 was received from the finance company.

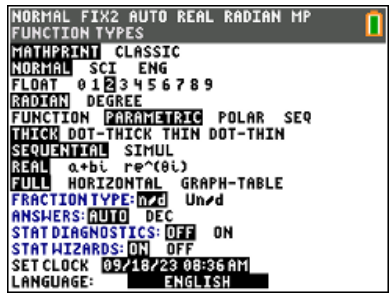


4. Place the cursor on **PMT**. Press [alpha] [solve].

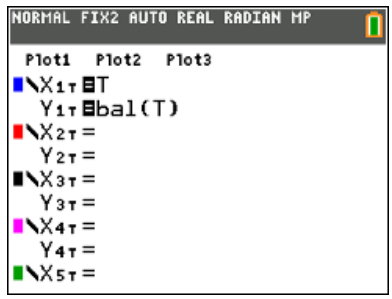
   The payment, -1453.61, is negative because that is the amount paid to the finance company each month.



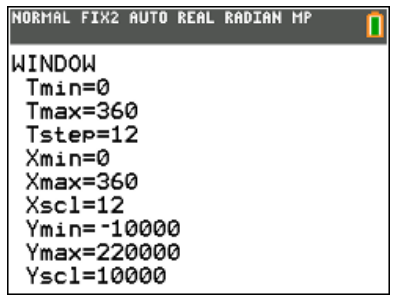
5. To graph the outstanding loan balance after each monthly payment, first press [mode] and select the parametric graphing mode.



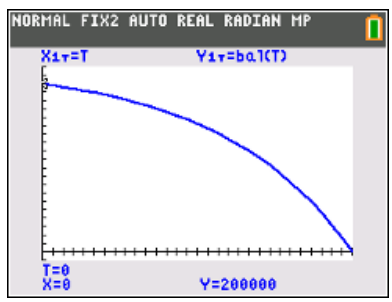
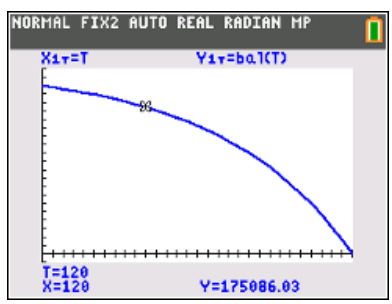
6. Press [y=]. Turn off all Plots.
7. Press [X,T,θ,n] to define X1T as **T**.
8. Arrow down to Y1T.
9. To define Y1T as **bal(T)**, press [apps], and select **Finance**. Select **bal(** from the CALC menu.
10. Press [X,T,θ,n] [ )].



11. Press [window], and enter appropriate values for the loan data. Possible values are shown.



12. Press [trace].



13. To display the balance for a particular time T, enter a value between Tmin and Tmax, inclusive, while in Trace mode. Then, press [enter].