TIMEVALUE™
s o f t w a r e

Mastering
Time Value of Money
Calculations with
TValue 6 Software

IMPORTANT WEBINAR DETAILS

- This webinar is an intermediate course **certified by NASBA for one CPE credit**. In order to receive CPE credit, **you must stay for the entire program and participate by responding in real time to ALL polling questions**. Certificates will be emailed approximately 2 to 3 business days after webinar.

- **Questions are encouraged**. Use the GoToWebinar console to submit your questions during the webinar. We will answer as many questions live as time allows near the end of the presentation or by email if we don't have time.

- To ensure the best experience, view presentation in **full-screen mode**

PRESENTATION TEAM

Marty Pellerin

- 20+ Years with TimeValue Software
- Industry Speaker/Presenter
- CFO/Senior VP/VP Finance

Zack Kissee

- 5 Years with TimeValue Software
- Senior Support Manager

ABOUT TIMEVALUE SOFTWARE

- Founded by a CPA from Price Waterhouse in 1984
- Located in Irvine, California
- Experts in time value of money calculations

- Over 500,000 users for all product lines in over 100 countries
- Our flagship product, TValue amortization software, is used by all top 100 accounting firms

AGENDA

TValue 6 Software Tour

- Features & Capabilities

TValue Software Sample Calculations

- Modifications/Restructuring
- Adjustable Rate Loan
- Present & Future Value Calculations
- Financial Planning

- Lease Calculations
- Internal Rate of Return
- Audit of Excel

Questions

TVALUE 6 SOFTWARE TOUR

CASH FLOW MATRIX INPUTS & SHORTCUTS

All input is done in the cash flow matrix.

Example of a simple mortgage showing a $50,000.00 loan at 5.5% interest for 60 months starting on January 1st, 2023.

Solve for any Unknown ("U")

TValue 6 can solve for any unknown between the interest rate, the principal, the payments, or the term but it can only solve for one variable at a time. In TValue, you want to put the other inputs into the Cash Flow Matrix and then you can solve for your variable or the unknown. Often the variable is your payment. To solve for the variable, put the letter "U" for unknown and click Calculate.

A. **Label** - Your file description. Can be displayed at the top of the amortization schedule.

B. **Compounding Period/Computation Interval** - Select period from the drop down menu

C. **Nominal Annual Rate** - Input your interest rate

D. **Event** – Choose from the drop-down list or create a custom event names

E. **Date** – Input 6 characters. Use shortcuts to advance date including D, M, Y, C

F. **Amount** – Shortcuts include K, H, M, B

G. **Number** – The number of times event occurs. Can use + - to adjust or X year for months.

H. **Period** – Time between events on a given cash flow line

I. **End Date** – Indicates the day of the last event in the series

J. **Memo** – Enter a description of the line item

LABEL

Enter a description of the schedule that you are working on. Click on the lower right corner to expand label field to add notes to the file as needed.

COMPOUNDING PERIOD

Click for drop down menu to select from 13 different Compound or Computation Interval periods.

INTEREST RATE OPTIONS

Click on the lower right corner to view inter-related rates.

Nominal Annual Rate: Typically the quoted rate

Effective Annual Rate: The effect of compounding

Periodic Rate: Rate per period

Daily Rate: Rate per year length

DATE LOCKING

Affects how subsequent dates in a series are determined for the last day of the month.

GUIDES

Simple way to start many common problems.
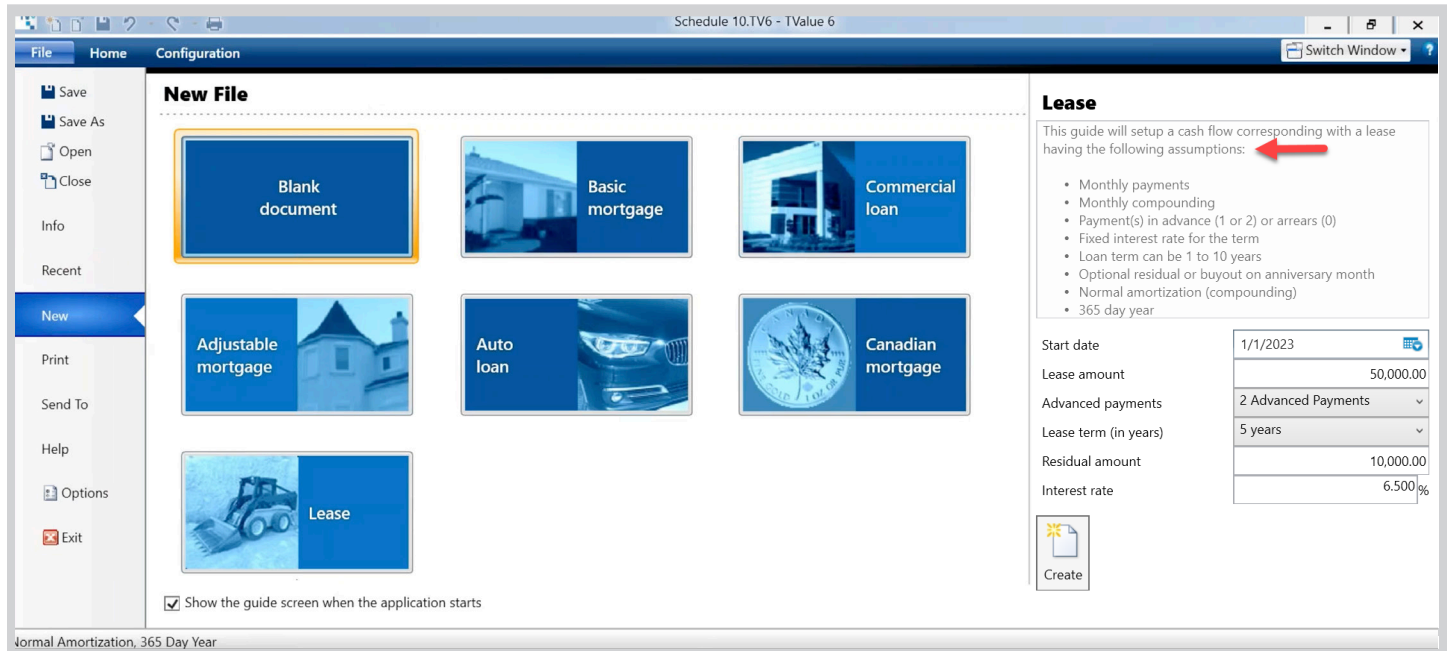
EXCEL PASTING

Pasting lines from Excel will make easy work of populating your cash flows.

	Event	Date	Amount	Number	Period	End Date
1	Loan	07/01/2021	300,000.00	1		
2	Payment	08/01/2021	4,831.48	1		
3	Payment	09/01/2021	4,831.48	1		
4	Payment	10/01/2021	0.00	1		
5	Payment	11/01/2021	4,831.48	1		
6	Payment	12/01/2021	5,000.00	1		
7	Payment	01/05/2022	4,831.48	1		
8	Payment	03/03/2022	8,000.00	1		
9	Payment	04/01/2022	8,864.12	1		
10	Payment	05/01/2022	4,831.48	1		
11	Payment	06/01/2022	5,000.00	1		
12	Payment	07/01/2022	5,000.00	1		
13	Payment	08/01/2022	5,500.00	1		

	A	B	C
1	Payment	8/1/2021	4,831.48
2	Payment	9/1/2021	4,831.48
3	Payment	10/1/2021	0.00
4	Payment	11/1/2021	4,831.48
5	Payment	12/1/2021	5,000.00
6	Payment	1/5/2022	4,831.48
7	Payment	3/3/2022	8,000.00
8	Payment	4/1/2022	8,864.12
9	Payment	5/1/2022	4,831.48
10	Payment	6/1/2022	5,000.00
11	Payment	7/1/2022	5,000.00
12	Payment	8/1/2022	5,500.00

TValue

TIMEVALUE software
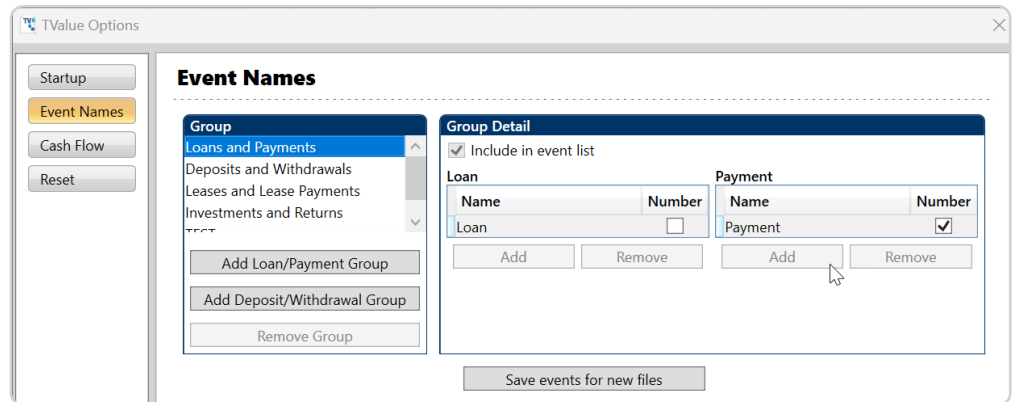
TVALUE OPTIONS

STARTUP

The directory displayed when you save or open a file. May change as needed. Guide screen, if checked, will display when the application starts.
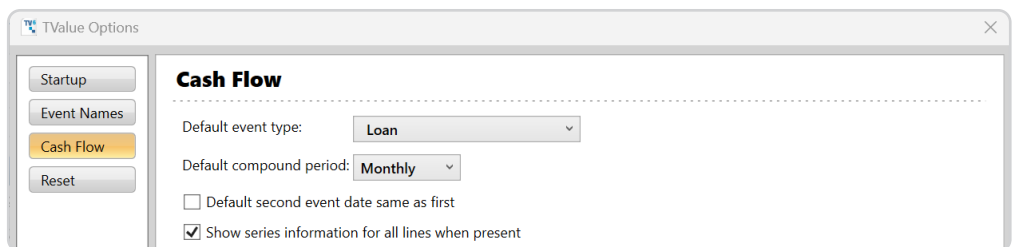
TValue Options   ✕

Startup
Event Names
Cash Flow
Reset

Startup

Default directory: C:\Users\Marty\OneDrive\Documents\TValue 6   Browse

☑ Show the guide screen when the application starts
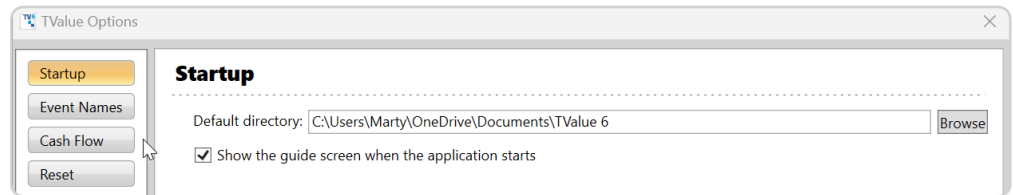
EVENT NAMES

Customize Groups and/ or Events. Add, edit, or remove from groups other than Loans or Deposits.

TValue Options   ✕

Startup
Event Names
Cash Flow
Reset

Event Names

Group
- Loans and Payments
- Deposits and Withdrawals
- Leases and Lease Payments
- Investments and Returns
- TEST

Add Loan/Payment Group
Add Deposit/Withdrawal Group
Remove Group

Group Detail
☑ Include in event list

Loan		Payment	
Name	Number	Name	Number
Loan	☐	Payment	☑
Add	Remove	Add	Remove

Save events for new files

CASH FLOW

Setting will determine the Event that will appear on new schedule and the related compound period.

TValue Options   ✕

Startup
Event Names
Cash Flow
Reset

Cash Flow

Default event type: Loan ▾

Default compound period: Monthly ▾

☐ Default second event date same as first

☑ Show series information for all lines when present

SEND TO

Attaches your amortization schedule or document to an email. Recipient of TValue 6 file must have TValue 6 or TValue Online to open.

Send as Attachment

Attach a copy of this document to an e-mail
- Share this file with other TValue users
- Enables other users to make adjustments to this TValue schedule

Send as PDF

Attach a PDF copy of the TValue amortization schedule to an e-mail
- Solve for any unknowns
- Share the resulting amortization schedule with anyone
- You will not be able to load the PDF into TValue and make further adjustments

COMPUTE OPTIONS

Compute Method: Normal, U.S. Rule, Canadian, Rule of 78

Year Length: 365, 364, 360
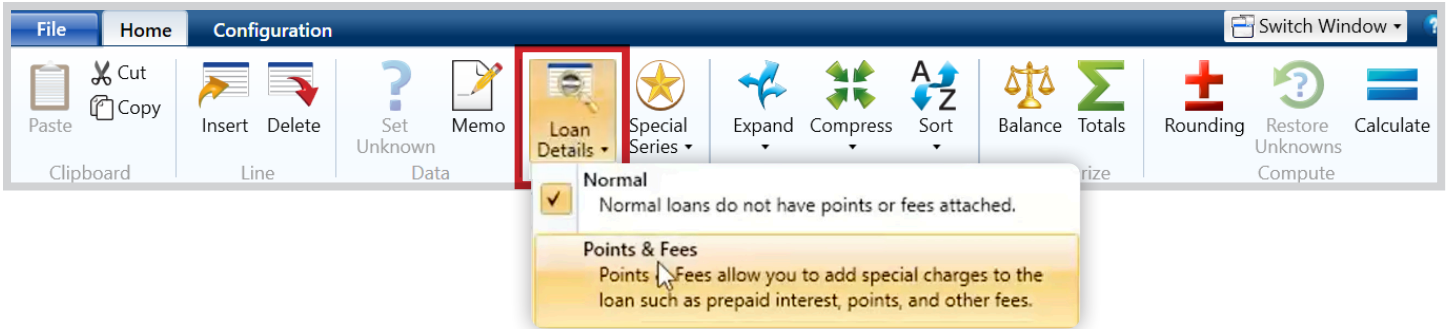
Date Counting: Normal, 30E3/360

Compute Method: Normal | Normal
Year Length: 365 days
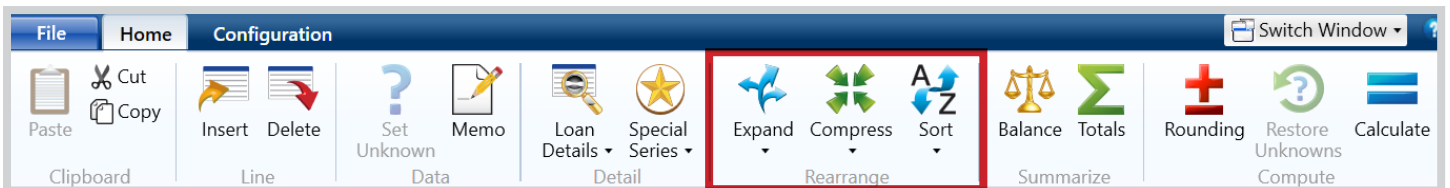Date Counting

Calculations

THE RIBBON - EASY ACCESS TO MANY COMMON TVALUE 6 FEATURES

LOAN DETAILS/POINTS AND FEES

Points, Prepaid Interest, and Fees to do APR Calculations.

Amount of loan:			200,000.00
Points paid on loan:	1.000	% =	2,000.00
Prepaid interest:	2	Day(s)	65.76 @ 32.88 per day
Other charges:			1,000.00
Amount financed:			196,934.24

EXPAND, COMPRESS, AND SORT

Great tools for editing payments and irregular cash flows.

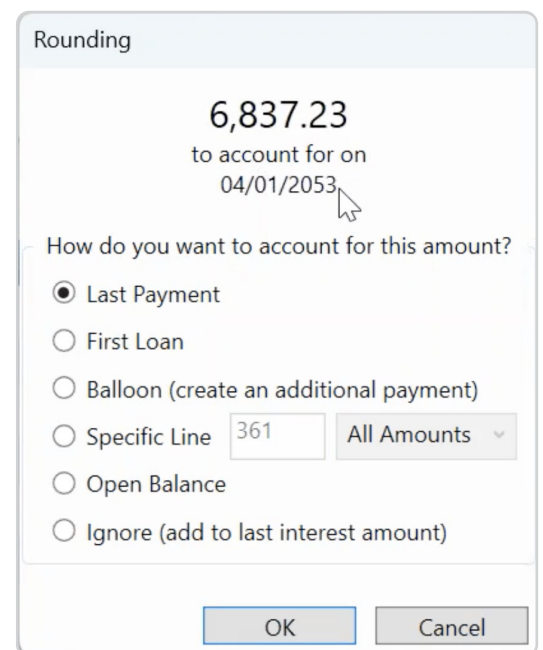|	Event	Date	Amount	Number
7	Payment	10/01/2023	1,199.10	
8	Payment	11/01/2023	1,199.10	
9	Payment	12/01/2023	1,199.10	
10	Payment	01/01/2024	1,199.10	
11	Payment	02/01/2024	1,199.10	
12	Payment	03/01/2024	0.00	
13	Payment	04/01/2024	1,199.10	
14	Payment	05/01/2024	1,199.10	
15	Payment	06/01/2024	1,199.10	
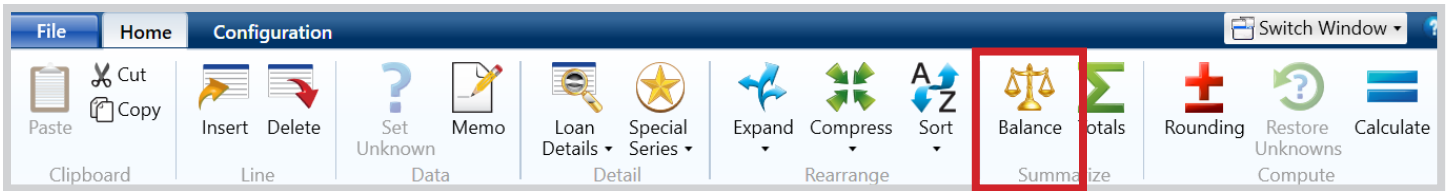
BALANCE

Reconcile the date corresponding to a cash flow balance or a balance at a specific date.

Balance

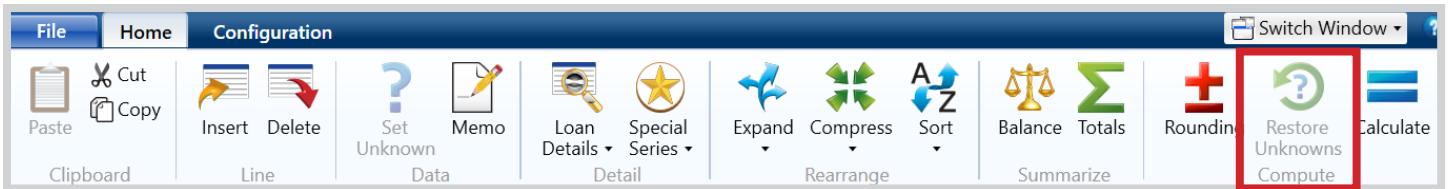|		
Date:	4/2/2023	Get Balance
Balance:	199,432.48	Get Date
Principal:	199,399.70	
Interest:	32.78	
	Create Balloon	Done
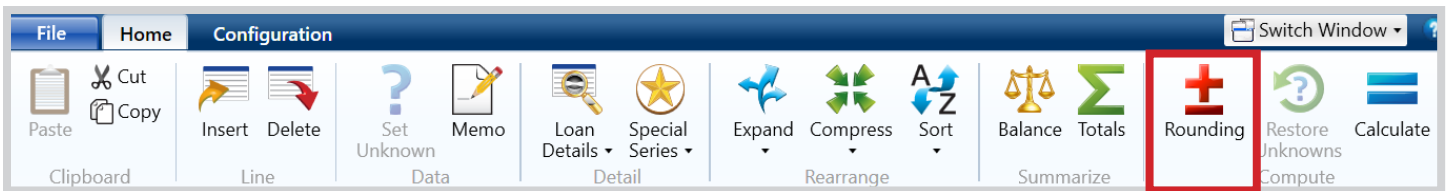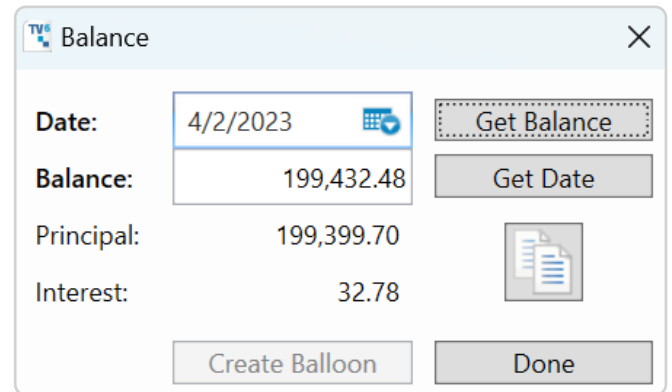
ROUNDING

Select from six different options. For loans that you don't want to reconcile, click on Open Balance.

Rounding

6,837.23
to account for on
04/01/2053

How do you want to account for this amount?

- ◉ Last Payment
- ○ First Loan
- ○ Balloon (create an additional payment)
- ○ Specific Line 361 All Amounts
- ○ Open Balance
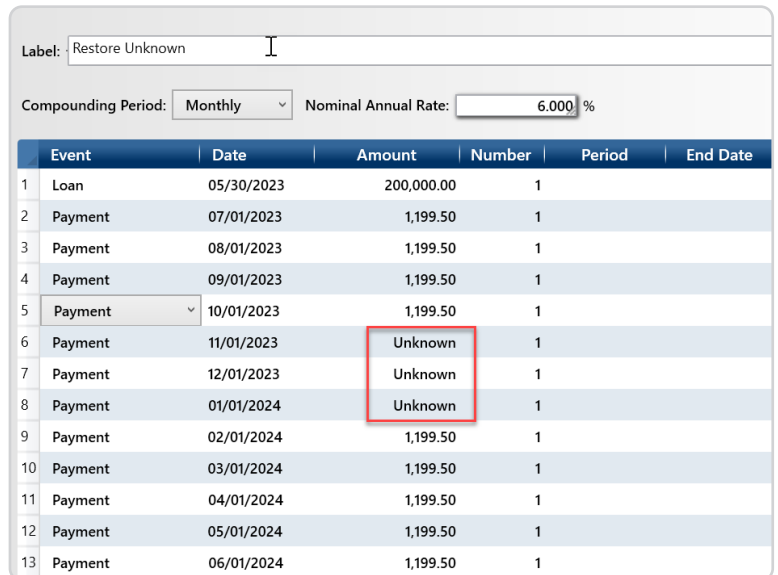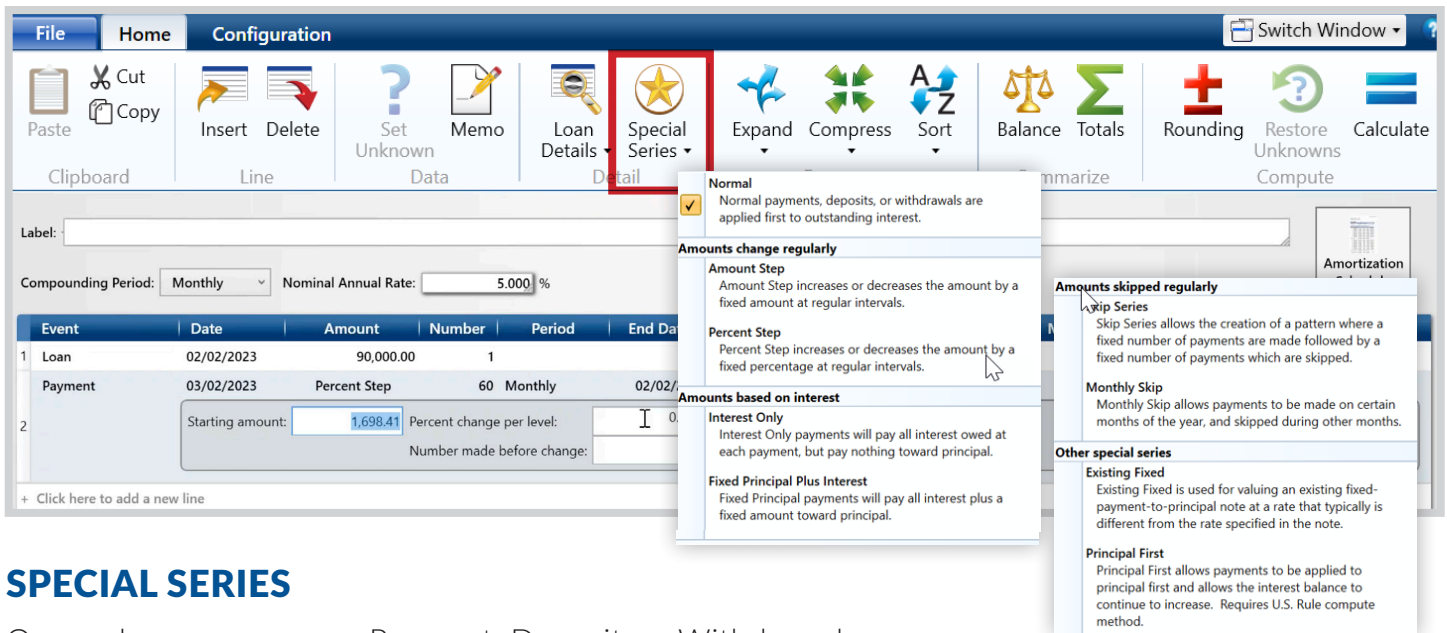- ○ Ignore (add to last interest amount)

OK   Cancel
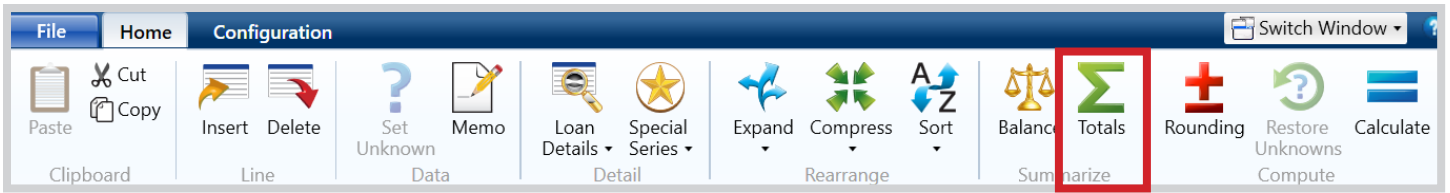
TOTALS

Provides a summary of totals for the current cash flows.
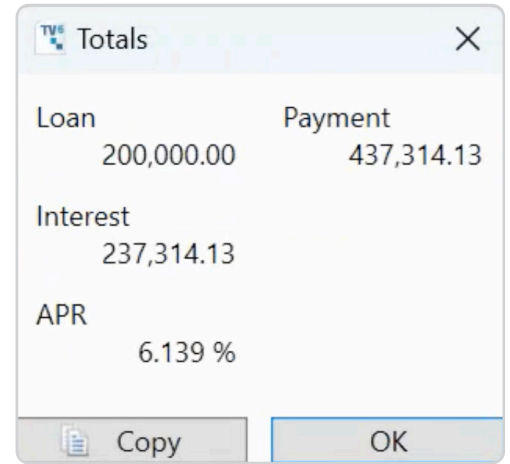
RESTORE UNKNOWNS

To restore an unknown value(s) after calculating.

Label:	Restore Unknown				

Compounding Period: Monthly   Nominal Annual Rate: 6.000 %

	Event	Date	Amount	Number	Period	End Date
1	Loan	05/30/2023	200,000.00	1		
2	Payment	07/01/2023	1,199.50	1		
3	Payment	08/01/2023	1,199.50	1		
4	Payment	09/01/2023	1,199.50	1		
5	Payment	10/01/2023	1,199.50	1		
6	Payment	11/01/2023	Unknown	1		
7	Payment	12/01/2023	Unknown	1		
8	Payment	01/01/2024	Unknown	1		
9	Payment	02/01/2024	1,199.50	1		
10	Payment	03/01/2024	1,199.50	1		
11	Payment	04/01/2024	1,199.50	1		
12	Payment	05/01/2024	1,199.50	1		
13	Payment	06/01/2024	1,199.50	1		

TValue™

TIMEVALUE software

SPECIAL SERIES

Open when you are on a Payment, Deposit, or Withdrawal line to access the various payments types.

Special Series - TValue's creative financing tool!

- **Normal** - Normal payments, deposits, or withdrawals are applied first to outstanding interest
- **Amount Step** - Increases or decreases the amount by a fixed amount at regular intervals
- **Percent Step** - Increases or decreases the amount by a fixed percentage at regular intervals
- **Interest Only** - Payments will pay all interest owed at each payment, but pay nothing towards principal
- **Fixed Principal Plus Interest** - Payments will pay all interest plus a fixed amount towards principal
- **Skip Series** - Create a pattern with fixed number of payments made followed by fixed number of skip payments
- **Monthly Skip** - Payments can be made on certain months of the year, and skipped or modified during other months
- **Existing Fixed** - Used for valuing an existing fixed-payment-to-principal note at a rate that typically is different from the rate specified in the note
- **Principal First** - Allows payments to be applied to principal first and allows the interest balance to continue to increase. Requires U.S. Rule compute method

Label: Cash Flow Data

Compounding Period: Monthly   **Nominal Annual Rate:** 5.500 %

Amortization Schedule

AMORTIZATION SCHEDULE

Schedule showing payments and principal and interest allocation.

ABC Loan

Compounding Period: Monthly

Nominal Annual Rate: 6.000%

Cash Flow Data - Loans and Payments

	Event	Date	Amount	Number	Period	End Date
1	Loan	03/30/2023	Points & Fees	1		
	Amount of loan		200,000.00			
	Points paid on Loan 1.000%		2,000.00			
	Prepaid Interest 2 Days @ 32.88		65.76			
	Other charges		1,000.00			
2	Payment	05/01/2023	1,199.10	360	Monthly	04/01/2053

TValue Amortization Schedule - Normal, 365 Day Year

	Date	Payment	Interest	Principal	Balance
Loan	03/30/2023				200,000.00
1	05/01/2023	1,199.10	1,000.00	199.10	199,800.90
2	06/01/2023	1,199.10	999.00	200.10	199,600.80
3	07/01/2023	1,199.10	998.00	201.10	199,399.70
4	08/01/2023	1,199.10	997.00	202.10	199,197.60
5	09/01/2023	1,199.10	995.99	203.11	198,994.49
6	10/01/2023	1,199.10	994.97	204.13	198,790.36

TRUTH IN LENDING DISCLOSURE

APR - Annual Percentage Rate can appear at bottom of amortization schedule.

355	11/01/2052	1,199.10	35.36	1,163.74	5,907.62
356	12/01/2052	1,199.10	29.54	1,169.56	4,738.06
2052 Totals		**14,389.20**	**732.22**	**13,656.98**	
357	01/01/2053	1,199.10	23.69	1,175.41	3,562.65
358	02/01/2053	1,199.10	17.81	1,181.29	2,381.36
359	03/01/2053	1,199.10	11.91	1,187.19	1,194.17
360	04/01/2053	1,199.10	4.93	1,194.17	0.00
2053 Totals		**4,796.40**	**58.34**	**4,738.06**	
Grand Totals		**431,676.00**	**231,676.00**	**200,000.00**	

ANNUAL PERCENTAGE RATE	FINANCE CHARGE	Amount Financed	Total of Payments
The cost of your credit as a yearly rate.	The dollar amount the credit will cost you.	The amount of credit provided to you or on your behalf.	The amount you will have paid after you have made all payments as scheduled.
6.141%	$ 234,741.76	$ 196,934.24	$ 431,676.00

TValue™

TIMEVALUE software

AMORTIZATION RIBBON

Create professional amortization schedules that are customizable by clicking on items to be included.

FORMAT OPTIONS

Add information that is relevant to your presentation including putting a header and footer on your amortization schedule.

Modification Options

Original Loan Amount: $200,000

Amortize Over: 360 Months

Interest Rate: 4.5%

Missed Payments: 4

Option 1: What is the 12-month Catch-up Payment?

Option 2: What is the Extended Term?

Label: Modification

Compounding Period: Monthly | Nominal Annual Rate: 4.500 %

Amortization Schedule

	Event	Date	Amount	Number	Period	End Date	Memo
7	Payment	07/01/2023	1,013.37	1			
8	Payment	08/01/2023	1,013.37	1			
9	Payment	09/01/2023	0.00	1			
10	Payment	10/01/2023	0.00	1			
11	Payment	11/01/2023	0.00	1			
12	Payment	12/01/2023	0.00	1			
13	Payment	01/01/2024	Unknown				
14	Payment	02/01/2024	Unknown				
15	Payment	03/01/2024	Unknown				
16	Payment	04/01/2024	Unknown				
17	Payment	05/01/2024	Unknown				
18	Payment	06/01/2024	Unknown				

Variable Rate Mortgage

Loan Amount:	$200,000
Amortize Over:	360 Months
Initial Interest Rate:	5%
Rate Change to 6%:	24 Months
Balloon:	10 Years

What is the Balloon?

Adjustable Rate Loan.TV6 - TValue 6

Switch Window ▾

File   **Home**   **Configuration**

Clipboard | Insert Delete | Set Unknown Memo | Loan Details ▾ Special Series ▾ | Expand ▾ Compress ▾ | Sort ▾ | Balance Totals | Compute
| Line | Data | Detail | Rearrange | Summarize |

Label: Adjustable Rate Loan

Amortization Schedule

Compounding Period: Monthly   Nominal Annual Rate: 5.000 %

	Event	Date	Amount	Number	Period	End Date	Compounding	Rat
1	Loan	01/01/2023	200,000.00	1				
2	Payment	02/01/2023	1,073.64	24	Monthly	01/01/2025		
3	Rate Change	01/01/2025					Monthly	
4	Payment	02/01/2025	1,193.02	96	Monthly	01/01/2033		
5	Payment	01/01/2033	Unknown	1				

+ Click here to add a new line

PRESENT VALUE CALCULATION EXAMPLE

Capitalize Operating Lease

Interest/Borrowing Rate: 5%

Monthly Payment: $1,500

Residual: $10,000

Term: 4 Years

What is the Capitalized Value?

Event	Date	Amount	Number	Period	End Date	Memo
1 Loan	01/01/2023	Unknown	1			
2 Payment	02/01/2023	1,500.00	48	Monthly	01/01/2027	
3 Payment	01/01/2027	10,000.00	1			

Label: Present Value

Compounding Period: Monthly   Nominal Annual Rate: 5.000 %

+ Click here to add a new line

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FUTURE VALUE CALCULATION EXAMPLE

College Savings Plan

Annual Investment 1st Year: $100

Increase Amount Every 2 Years: $25

Annual Rate of Return: 6%

Term: 20 Years

How Much Will I Have Saved for College?

TValue

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FINANCIAL PLANNING EXAMPLE

Retirement Savings

Retirement Goal: $1 Million

Monthly Withdrawals: $6,000

Annual Rate of Return: 4%

How Long Will My Funds Last?

TValue financial planning software window showing:

- Label: Financial Planning
- Compounding Period: Monthly
- Nominal Annual Rate: 4.000 %

	Event	Date	Amount	Number	Period	End Date	Memo
1	Deposit	01/01/2023	1,000,000.00	1			
2	Withdrawal	02/01/2023	6,000.00	Unknown	Monthly		Pending

+ Click here to add a new line

LEASING CALCULATION EXAMPLE

Pricing a Lease

Lease Amount: $50,000

Interest Rate: 10%

Term: 60 Months

Advanced Payments: 2 Months

Residual: $5,000

What is My Lease Payment?

INTERNAL RATE OF RETURN CALCULATION EXAMPLE

Internal Rate of Return (XIRR)

Compounding Period: Daily
Investment (1/1/2023): $1 million
Return (1/1/2024): 1.2 million

What is My Return on Investment?

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AUDITING OF EXCEL

"Excel Does Not Guarantee Excellence"

Terms: years		30	30 year Schedule			Balance due	15	years
	Initial Int Rate:		5.50%	per annum		int rate/day for 360 day yr:		0.01528%
each month's Interest is calculated as (days in each month) x (interest rate/day rate):								0.01549%
Year/ Mo #	Payment Due	Day/Mo	Begin Princ	Payment	Interest for prior month	Principal for Month		End Balance
2016	1		Escrow Closed 2/19/2016 per Escrow Settlement Sheet attached					
1	2/19/16	29	2,350,000.00			-		2,350,000.00
Feb	3/1/16	11	2,350,000.00	13,343.04	3,949.31	9,393.73		2,340,606.27
Mar	4/1/16	31	2,340,606.27	13,343.04	11,239.33	2,103.71		2,338,502.56
Apr	5/1/16	30	2,338,502.56	13,343.04	10,867.00	2,476.04		2,336,026.52
May	6/1/16	31	2,336,026.52	13,343.04	11,217.34	2,125.70		2,333,900.82

BENEFITS OF USING TVALUE VERSUS EXCEL

- **Quick and easy**

- **Calculations are error free**

- **Handles irregular payments**

- **Quick "what if" calculations**

- **Simple to the complex**

- **Detailed amortization schedules**

- **Unlimited customer support**

TIMEVALUE SOFTWARE PRODUCTS

AMORTIZATION SOFTWARE & FINANCIAL CALCULATORS

TValue 6
Desktop Edition for Windows

TValue Online
Cloud Based Edition

TValue Direct for Salesforce
Integrated App

TValue Engine
Windows Software Development Kit (SDK) & REST API Web Service

TCalc
Online Financial Calculators

WORKLOAD MANAGEMENT SOFTWARE

File In Time
Due Date Tracking & Task Management Software

TAX INTEREST & PENALTY SOLUTIONS

TaxInterest
IRS/State Interest & Penalty Software

TaxInterest FIN 48
Excel Add-in

TaxInterest Netting
IRS Global Interest Netting Software

TaxInterest Engine
Software Development Kit

Tax941
IRS Payroll Tax Interest, Penalty & Form Software

PayrollPenalty
IRS Failure to Deposit Penalty Abatement Software

All TimeValue Software products come with a one-year, money-back guarantee.

TVALUE SOFTWARE PRICING

TValue Online User License — $60/year, per user
- Future updates and upgrades
- Exclusive access to over 60 training videos
- Unlimited product and technical support

TValue 6 Initial User License — $149
- TValue 6 Additional Licenses - $99
- TValue 6 Upgrade - $119

TValue 6 Annual Maintenance Service — $35/year, per user
- Future updates and upgrades
- Exclusive access to over 60 training videos
- Unlimited product and technical support

TValue Direct for Salesforce — $15/month, per user
- Future updates and upgrades
- Unlimited product and technical support

TValue Engine Windows Software Development Kit (SDK) or REST API Web Service — Call for pricing specific to your needs

Order online at www.TimeValue.com or contact a TimeValue Software expert at 800-426-4741 Monday-Friday 7am to 5pm (Pacific Time) for pricing specific to your needs.

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Contact our TValue Support Team
at **info@TimeValue.com**
or call 800-426-4741
for more information on how TValue can
help you with your individual needs.