TVM Time Value of Money/Amortization Worksheet

Available columns: A B C D

Label	Meaning	Type of Variable
FV	Future value	Ent. or Comp.
PMT	Payment	Ent. or Comp.
PV	Present value	Ent. or Comp.
I/Y	Interest rate per year	Ent. or Comp.
N	Number of periods	Ent. or Comp.
P1	Starting payment	Entered
P2	Ending payment	Entered
BAL	Balance	Computed
PRN	Principal paid	Computed
INT	Interest paid	Computed
APR	Annual percentage rate	Setting
AER	Annual effective rate	Setting
P/Y	Number of payments per year	Entered
END	End-of-period payments	Setting
BGN	Beginning-of-period payments	Setting
C=P	C/Y is equal to P/Y	Setting
C≠P	C/Y is not equal to P/Y	Setting
C/Y	Compounding periods per year	Entered

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2nd [CLR COL] sets P1 = 1 and P2 = 1.

2nd [Reset] ⟨YES⟩ sets P1 = 1, P2 = 1, APR (not AER), P/Y = 12, END (not BGN), C=P (not C≠P), and C/Y = 12.

From the second screen, repeatedly pressing Compute generates an amortization schedule (increments by the difference between P1 and P2) and displays the SCHEDULE indicator.

Enter PV, FV, and PMT as negative if outflows, positive if inflows.

C=P is available as a selection only if you set APR at the third screen.

C/Y is available as an entered variable only if you set C≠P.

[Cash F] Cash Flow Worksheet

Available columns: A B

Label	Meaning	Type of Variable
CFo	Initial cash flow	Entered
I	Interest rate per period	Entered
NPV	Net present value at I	Computed
NFV	Net future value at I	Computed
IRR	Internal rate of return	Computed
CFn	Amount of nth cash flow	Entered
FRQ	Number of occurrences	Entered
n	Current cash-flow number	Indicator
DEL	Deletes current cash flow	Command
INS	Inserts new cash flow	Command

[2nd] [CLR COL] sets n = 1.

[2nd] [Reset] ⟨YES⟩ sets n = 1.

The second screen is a sample of a cash-flow screen. Cash-flow screens, up to 24 per column, are added as you enter or insert cash-flow data.

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When a cash-flow screen is displayed, pressing [←] or [→] always displays the first cash-flow screen of the other column.

To move quickly to a specific cash-flow screen, enter a new value for n.

INS is not shown if you have used all 24 cash-flow screens.

[Bond] Bond Calculations Worksheet

Available columns: A B C D

Label	Meaning	Type of Variable
SDT	Settlement date	Entered
CPN	Annual coupon rate in percent	Entered
RDT	Redemption date	Entered
RV	Redemption value	Entered
YLD	Yield to redemption	Ent. or Comp.
PRI	Dollar price	Ent. or Comp.
ACT	Actual/actual day-count method	Setting
360	30/360 day-count method	Setting
QTY	Quantity of $1000 bonds	Entered
PRN	Principal (PRI × 10 × QTY)	Computed
AI	Accrued interest	Computed
NET	Net amount paid (PRN + AI)	Computed

[2nd] [CLR COL] sets RV = 100 and QTY = 1 (SDT, RDT, and day-count method are not changed).

[2nd] [Reset] ⟨YES⟩ sets SDT = 12.311987, RDT = 12.311987, RV = 100, ACT (not 360), and QTY = 1.

Worksheet assumes two coupon payments per year (semiannual).

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Depr **Depreciation Worksheet**

Available columns: A

Label	Meaning	Type of Variable
SL	Straight-line method	Setting
SYD	Sum-of-the-years'-digits method	Setting
DB	Declining-balance method	Setting
DBX	DB method with crossover to SL	Setting
DB%	Declining-balance %	Entered
LIF	Life of the asset in years	Entered
MO1	Starting month	Entered
CST	Cost of the asset	Entered
SAL	Salvage value of the asset	Entered
YR	Year to compute	Entered
DEP	Depreciation in year	Computed
RBV	Remaining book value at end of year	Computed
RDV	Remaining depreciable value	Computed
mmm	Shows selected method (mmm is SL, SYD, DB, DBX, or XSL)	Indicator

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2nd [CLR COL] sets LIF = 1, MO1 = 1, and YR = 1.

2nd [Reset] 〈YES〉 sets SL (not SYD, DB, or DBX), DB% = 200 (shown only if you select DB or DBX), LIF = 1, MO1 = 1, and YR = 1.

You can enter DB% only if you select DB or DBX as the depreciation method.

From the bottom screen, repeatedly pressing **Compute** generates a depreciation schedule and displays the SCHEDULE indicator.

The DBX indicator changes to XSL (crossover to straight line) after the crossover point.

If you enter a value other than 1 for MO1, the first and last years are partial years for depreciation. Example: Entering a value of 7 specifies the seventh month of the fiscal year as the starting month.

Stat Statistics Worksheet

Available columns: A

Label	Meaning	Type of Variable
X	Current x value	Entered
Y	Current y value	Entered
N	Number of data points added	Indicator
Σ+	Adds the current data point	Command
Σ−	Removes the current data point	Command
$\overline{X}$	Mean (average) of x values	Computed
σX	Population standard deviation	Computed
SX	Sample standard deviation	Computed
$\overline{Y}$	Mean (average) of y values	Computed
σY	Population standard deviation	Computed
SY	Sample standard deviation	Computed
INT	Linear regression y-intercept	Computed
SLP	Linear regression slope	Computed
COR	Correlation coefficient	Computed
X′	Predicted x value	Ent. or Comp.
Y′	Predicted y value	Ent. or Comp.
ΣX	Sum of x values	Computed
ΣX2	Sum of x squared values	Computed
ΣY	Sum of y values	Computed
ΣY2	Sum of y squared values	Computed
ΣXY	Sum of the xy products	Computed

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Except for X′ and Y′, all computed variables are calculated automatically. You do not have to press Compute after entering the data set.

X′ and Y′ are shown only if you have entered enough data points so that the calculator can compute INT, SLP, and COR.

2nd [I Conv] **Interest Conversions Worksheet**

Available columns: A

Label	Meaning	Type of Variable
APR	Annual percentage rate	Ent. or Comp.
AER	Annual effective rate	Ent. or Comp.
C/Y	Compounding periods per year	Entered

2nd [CLR COL] does not change C/Y.

2nd [Reset] ⟨YES⟩ sets C/Y = 12.

2nd [Δ%] **Percent Change Worksheet**

Available columns: A

Label	Meaning	Type of Variable
OLD	Old value	Ent. or Comp.
NEW	New value	Ent. or Comp.
CHG	Percent change	Ent. or Comp.

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2nd [Profit] **Profit Calculations Worksheet**

Available columns: A

Label	Meaning	Type of Variable
CST	Cost	Ent. or Comp.
SEL	Selling price	Ent. or Comp.
MAR	Profit margin	Ent. or Comp.
CST	Cost	Ent. or Comp.
SEL	Selling price	Ent. or Comp.
MU	Markup	Ent. or Comp.

The values of CST and SEL are duplicated on the two screens.

2nd [Date] **Date Calculations Worksheet**

Available columns: A

Label	Meaning	Type of Variable
DT1	Date 1	Ent. or Comp.
DT2	Date 2	Ent. or Comp.
DBD	Days between dates	Ent. or Comp.
ACT	Actual/actual day-count method	Setting
360	30/360 day-count method	Setting

2nd [CLR COL] sets both DT1 and DT2 to either 12.311987 or 31.121987, depending on the date format selected.

2nd [Reset] 〈YES〉 sets ACT (not 360), sets date format to U.S., and sets DT1 and DT2 = 12.311987.

You can compute DT1 or DT2 only if you select ACT as the day-count method.

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2nd [Memory] **Memory Worksheet**

Available columns: A

Label	Meaning	Type of Variable
M0	Memory 0	Entered
M1	Memory 1	Entered
M2	Memory 2	Entered
M3	Memory 3	Entered
M4	Memory 4	Entered
M5	Memory 5	Entered
M6	Memory 6	Entered
M7	Memory 7	Entered
M8	Memory 8	Entered
M9	Memory 9	Entered

2nd [Format] **Format**

Function: Selecting the display format for numbers and dates

Available columns: A

Label		Meaning	Type of Variable
DEC	x	x is number of decimal places to be displayed (0–9), where 9 specifies floating-decimal format	Entered
US	12.311987	U.S. date format (mm.ddyyyy)	Setting
EUR	31.121987	European format (dd.mmyyyy)	Setting
US	1,000,000.00	U.S. number format	Setting
EUR	1.000.000,00	European format	Setting

2nd [CLR COL] and 2nd [Reset] ⟨YES⟩ set DEC = 2, U.S. number format, and U.S. date format.

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Adjusting the Display Contrast

1. Press and release the 2nd key.

2. Use one of two keys:
   - Press and hold [Contrast ↑] to increase the contrast.
   - Press and hold [Contrast ↓] to decrease the contrast.

As you change the contrast setting, the calculator displays the message CONTRAST and a number in the range 0 through 9 to show the current setting (0 is the lightest setting and 9 is the darkest setting).

Copying the Contents of One Column to Another Column

Example: Copy column A to column B in any multicolumn worksheet.

1. Move to column A.
2. Press [2nd] [COPY COL].

   COPY A TO _ is displayed.

3. Press ⟨B⟩.

Copying a Single Value from Worksheet to Worksheet

Example: Copy the present value (PV) from the TVM worksheet to the initial cash flow value (CFo) in the Cash Flow worksheet.

1. Press [TVM] to display the top screen of the TVM worksheet.
2. Press [RCL] ⟨PV⟩ to recall the present value to the calculator line.
3. Press [Cash F] to display the top screen of the Cash Flow worksheet:
4. Press ⟨CFo⟩ to store the value in the calculator line as the initial cash flow value.

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Memory Examples (using the digit keys to specify which memory)

In each example, the result is stored in the specified memory.

Example	Key Sequence
Store a value in memory 3	14.95 [STO] 3
Clear memory 4	0 [STO] 4
Recall value from memory 7	[RCL] 7
Add 52 to memory 1	52 [STO] [+] 1
Subtract 65 from memory 9	65 [STO] [−] 9
Multiply memory 0 by 4.5	4.5 [STO] [×] 0
Divide memory 4 by 12	12 [STO] [÷] 4

Memory Examples (using the Memory Worksheet)

In each example, the result is stored in the specified memory.

Example	Key Sequence
Store a value in memory 3	14.95 ⟨M3⟩
Clear memory 4	0 ⟨M4⟩
Recall value from memory 7	[RCL] ⟨M7⟩
Add 52 to memory 1	52 [STO] [+] ⟨M1⟩
Subtract 65 from memory 9	65 [STO] [−] ⟨M9⟩
Multiply memory 0 by 4.5	4.5 [STO] [×] ⟨M0⟩
Divide memory 4 by 12	12 [STO] [÷] ⟨M4⟩

Correcting Entries

Keystroke	Purpose
[BKSP]	Clears the last digit from the calculator line if you haven't yet pressed an operation key ([+], [−], [×], [÷], etc.).
[CE/C]	Clears incorrect entries in the calculator line (if you haven't yet pressed an operation key) and clears error conditions.

Clearing the Calculator

Keystrokes	Purpose
[CE/C] [CE/C]	Clears the calculator line and any pending operations.
[2nd] [CLR COL]	Clears numeric values in the current column and displays top screen of current column. (Effects on settings vary among worksheets.)
[2nd] [Reset] 〈YES〉	Clears numeric values in all columns of all worksheets; restores all factory settings.

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Meanings of Error Numbers

Error No.	Meaning
ERROR 1	Overflow
ERROR 2	Invalid argument
ERROR 3	Too many pending operations
ERROR 4	Input out of range
ERROR 5	No solution exists
ERROR 6	Invalid date
ERROR 7	Iteration limit exceeded

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Quick Reference Cards

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TEXAS INSTRUMENTS

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