

# FINANCE

Tvm: TVM with different payment and interest periods solving for N (3s)	<b>TIME VALUE OF MONEY</b> N: 798.58 I/YR: 6. PV: 200000. I/YR: 1. PMT: -1000. P/YR: 12. FV: 100000. BEG/END: 'B'	<b>TIME VALUE OF MONEY</b> N: 10. I/YR: 6. PV: 0. I/YR: 1. PMT: -1000. P/YR: .5 FV: 17857.0 BEG/END: 'E'
solving for FV (3s)	number of payments EDIT CANCEL OK	future value EDIT CANCEL OK
Tvm: TVM with different payment and interest periods solving for I%YR (3s)	<b>TIME VALUE OF MONEY</b> N: 15. I/YR: 5.9987 PV: 20000. I/YR: 1. PMT: -1387. P/YR: 12. FV: 0. BEG/END: 'E'	RAD XYZ DEC R= 'X' CHONE FINANCE3 USR 7: 6: 5: 4: 3: 2: 1: I/YR: 5.998758444 Ieff%YR: 6.166469619 Tvm IxIeff FVxPV Intco Irpay Irpax
IxIeff: effective interest (0.1s)	number of payments EDIT CANCEL OK	Tvm IxIeff FVxPV Intco Irpay Irpax
Tvm: solving for FV (3s)	<b>TIME VALUE OF MONEY</b> N: 10. I/YR: 4. PV: 0. I/YR: 4. PMT: -1000. P/YR: 2. FV: BEG/END: 'E'	<b>TIME VALUE OF MONEY</b> N: 10. I/YR: 4. PV: 0. I/YR: 4. PMT: -1000. P/YR: 2. FV: 10954.7 BEG/END: 'E'
FVxPV: future to present value (0.1s)	no. of interest periods per year EDIT CANCEL OK	future value EDIT CANCEL OK
FVxPV: present to future value (0.1s)	9: 8: 7: 6: 5: 4: 3: 2: 1: FV: 10954.73 PV: 8977.89 Tvm IxIeff FVxPV Intco Irpay Irpax	9: 8: 7: 6: 5: 4: 3: 2: 1: PV: 8977.89 FV: 10954.73 Tvm IxIeff FVxPV Intco Irpay Irpax
Intconv: interest conversion (2s)	<b>INTEREST CONVERSION</b> IYR: 1. PYR: 12. IZYR: 5.9987 Ieff%: 6.166 Iper%: 5.998 Icon%: 6.182	<b>IRREGULAR PAYMENTS</b> PV 0. FV 9900. IZYR PYR 12.
Irpaym: first screen	no. of interest periods per year EDIT CANCEL OK	INTEREST PER YEAR? EDIT CANCEL OK
Irpaym: second screen with irregular payments	1 102.26 30. 2 160. 26. 3 165. 7. 4 5 6 7	9: 8: 7: 6: 5: 4: 3: 2: 1: I/YR: 7.04733306 Tvm IxIeff FVxPV Intco Irpay Irpax
result interest (4s)	1-1: 102.26 EDIT VEC +MID MID+ GO+= GO+	Tvm IxIeff FVxPV Intco Irpay Irpax
VCex: example	9: 8: 7: 6: 5: 4: 3: 2: 1: Debt: 300000. N: 20. I/YR: 8. Irpay VCex Vamor Canor Manex Manor	Y R A I P 1. 300000. 15000. 24000. 33000. 2. 285000. 15000. 22800. 37800. 3. 270000. 15000. 21600. 36600. 4. 255000. 15000. 20400. 35400. 5. 240000. 15000. 19200. 34200. 6. 225000. 15000. 18000. 33000. 7. 210000. 15000. 16800. 31800. TEXT CANCEL OK
Camort: constant amortisation 300000(debt) 20(years) 8 (interest) (2s)	9: 8: 7: 6: 5: 4: 3: 2: 1: Debt: 300000. N: 20. I/YR: 8. Irpay VCex Vamor Canor Manex Manor	Y R A I P 1. 30000. 655.57 2400. 3055 2. 29344.43 708.01 2347.55 3055 3. 28636.42 764.65 2290.91 3055 4. 27871.77 825.82 2229.74 3055 5. 27045.94 891.89 2163.68 3055 6. 26154.05 963.24 2092.32 3055 7. 25190.81 1040.3 2015.26 3055 TEXT CANCEL OK
Vamort: variable amortisation 300000(debt) 20(years) 8 (interest) (2s)	9: 8: 7: 6: 5: 4: 3: 2: 1: Debt: 300000. N: 20. I/YR: 8. Irpay VCex Vamor Canor Manex Manor	Y R A I P 1. 30000. 655.57 2400. 3055 2. 29344.43 708.01 2347.55 3055 3. 28636.42 764.65 2290.91 3055 4. 27871.77 825.82 2229.74 3055 5. 27045.94 891.89 2163.68 3055 6. 26154.05 963.24 2092.32 3055 7. 25190.81 1040.3 2015.26 3055 TEXT CANCEL OK

Mamex: example for mortgage amortisation	<pre> 0: 1: 2: 3: 4: 5: 6: 7: 8: 9: 10: 11: 12: 13: 14: 15: 16: 17: 18: 19: 20: 21: 22: 23: 24: 25: 26: 27: 28: 29: 30: 31: 32: 33: 34: 35: 36: 37: 38: 39: 40: 41: 42: 43: 44: 45: 46: 47: 48: 49: 50: 51: 52: 53: 54: 55: 56: 57: 58: 59: 60: 61: 62: 63: 64: 65: 66: 67: 68: 69: 70: 71: 72: 73: 74: 75: 76: 77: 78: 79: 80: 81: 82: 83: 84: 85: 86: 87: 88: 89: 90: 91: 92: 93: 94: 95: 96: 97: 98: 99: </pre>	<pre> Y      R      A      I 1.  200000.  2000.  16000.  1 2.  192000.  2160.  15240.  1 3.  195840.  2322.8  15667.2  1 4.  193507.2  2519.42  15420.52  1 5.  190927.72  2720.92  15279.02  1 6.  188266.8  2932.66  15061.34  1 7.  185328.14  3173.75  14826.25  1 </pre>
Mamort: mortgage amortisation (3s)	<pre> 0: 1: 2: 3: 4: 5: 6: 7: 8: 9: 10: 11: 12: 13: 14: 15: 16: 17: 18: 19: 20: 21: 22: 23: 24: 25: 26: 27: 28: 29: 30: 31: 32: 33: 34: 35: 36: 37: 38: 39: 40: 41: 42: 43: 44: 45: 46: 47: 48: 49: 50: 51: 52: 53: 54: 55: 56: 57: 58: 59: 60: 61: 62: 63: 64: 65: 66: 67: 68: 69: 70: 71: 72: 73: 74: 75: 76: 77: 78: 79: 80: 81: 82: 83: 84: 85: 86: 87: 88: 89: 90: 91: 92: 93: 94: 95: 96: 97: 98: 99: </pre>	<pre> Debt: 200000. I%YR: 8 A%YR: 1 </pre>
Mamort: mortgage amortisation	<pre> 0: 1: 2: 3: 4: 5: 6: 7: 8: 9: 10: 11: 12: 13: 14: 15: 16: 17: 18: 19: 20: 21: 22: 23: 24: 25: 26: 27: 28: 29: 30: 31: 32: 33: 34: 35: 36: 37: 38: 39: 40: 41: 42: 43: 44: 45: 46: 47: 48: 49: 50: 51: 52: 53: 54: 55: 56: 57: 58: 59: 60: 61: 62: 63: 64: 65: 66: 67: 68: 69: 70: 71: 72: 73: 74: 75: 76: 77: 78: 79: 80: 81: 82: 83: 84: 85: 86: 87: 88: 89: 90: 91: 92: 93: 94: 95: 96: 97: 98: 99: </pre>	<pre> TEXT  OK 154.16 10067.67 7932.33 18000. 086.49 10873.08 7126.92 18000. 213.41 11742.93 6257.07 18000. 470.48 12682.36 5317.64 18000. 728.12 13696.95 4303.05 18000. 091.17 14792.71 3207.29 18000. 298.46 15976.12 2023.88 18000. 322.34 322.34 745.79 322.34 </pre>
Cashex: choosebox with examples, calls Cashflow	<pre> 0: 1: 2: 3: 4: 5: 6: 7: 8: 9: 10: 11: 12: 13: 14: 15: 16: 17: 18: 19: 20: 21: 22: 23: 24: 25: 26: 27: 28: 29: 30: 31: 32: 33: 34: 35: 36: 37: 38: 39: 40: 41: 42: 43: 44: 45: 46: 47: 48: 49: 50: 51: 52: 53: 54: 55: 56: 57: 58: 59: 60: 61: 62: 63: 64: 65: 66: 67: 68: 69: 70: 71: 72: 73: 74: 75: 76: 77: 78: 79: 80: 81: 82: 83: 84: 85: 86: 87: 88: 89: 90: 91: 92: 93: 94: 95: 96: 97: 98: 99: </pre>	<pre> IRREGULAR PAYMENTS/CASHFLOW I%YR 9. PYR 1. </pre>
Cashflow: interest, payments per year	<pre> 0: 1: 2: 3: 4: 5: 6: 7: 8: 9: 10: 11: 12: 13: 14: 15: 16: 17: 18: 19: 20: 21: 22: 23: 24: 25: 26: 27: 28: 29: 30: 31: 32: 33: 34: 35: 36: 37: 38: 39: 40: 41: 42: 43: 44: 45: 46: 47: 48: 49: 50: 51: 52: 53: 54: 55: 56: 57: 58: 59: 60: 61: 62: 63: 64: 65: 66: 67: 68: 69: 70: 71: 72: 73: 74: 75: 76: 77: 78: 79: 80: 81: 82: 83: 84: 85: 86: 87: 88: 89: 90: 91: 92: 93: 94: 95: 96: 97: 98: 99: </pre>	<pre> INTEREST PER YEAR? EDIT  OK </pre>
[OK] shows irregular payments	<pre> 0: 1: 2: 3: 4: 5: 6: 7: 8: 9: 10: 11: 12: 13: 14: 15: 16: 17: 18: 19: 20: 21: 22: 23: 24: 25: 26: 27: 28: 29: 30: 31: 32: 33: 34: 35: 36: 37: 38: 39: 40: 41: 42: 43: 44: 45: 46: 47: 48: 49: 50: 51: 52: 53: 54: 55: 56: 57: 58: 59: 60: 61: 62: 63: 64: 65: 66: 67: 68: 69: 70: 71: 72: 73: 74: 75: 76: 77: 78: 79: 80: 81: 82: 83: 84: 85: 86: 87: 88: 89: 90: 91: 92: 93: 94: 95: 96: 97: 98: 99: </pre>	<pre> NPV: 6728.63 NFV: 17362.73 PMT: (-988.75) I%YR: 11.299573403 </pre>
[ENTER]: net present, future value, payment, internal rate of return(5s)	<pre> 0: 1: 2: 3: 4: 5: 6: 7: 8: 9: 10: 11: 12: 13: 14: 15: 16: 17: 18: 19: 20: 21: 22: 23: 24: 25: 26: 27: 28: 29: 30: 31: 32: 33: 34: 35: 36: 37: 38: 39: 40: 41: 42: 43: 44: 45: 46: 47: 48: 49: 50: 51: 52: 53: 54: 55: 56: 57: 58: 59: 60: 61: 62: 63: 64: 65: 66: 67: 68: 69: 70: 71: 72: 73: 74: 75: 76: 77: 78: 79: 80: 81: 82: 83: 84: 85: 86: 87: 88: 89: 90: 91: 92: 93: 94: 95: 96: 97: 98: 99: </pre>	<pre> 1-1: -50000. EDIT  OK </pre>
Cflex: example for Cfl->NPV	<pre> 0: 1: 2: 3: 4: 5: 6: 7: 8: 9: 10: 11: 12: 13: 14: 15: 16: 17: 18: 19: 20: 21: 22: 23: 24: 25: 26: 27: 28: 29: 30: 31: 32: 33: 34: 35: 36: 37: 38: 39: 40: 41: 42: 43: 44: 45: 46: 47: 48: 49: 50: 51: 52: 53: 54: 55: 56: 57: 58: 59: 60: 61: 62: 63: 64: 65: 66: 67: 68: 69: 70: 71: 72: 73: 74: 75: 76: 77: 78: 79: 80: 81: 82: 83: 84: 85: 86: 87: 88: 89: 90: 91: 92: 93: 94: 95: 96: 97: 98: 99: </pre>	<pre> cashFlow examples ex1: -660000. 1246 ex2: -462000. 5431 ex3: -100000 40000 </pre>
[OK] gives example	<pre> 0: 1: 2: 3: 4: 5: 6: 7: 8: 9: 10: 11: 12: 13: 14: 15: 16: 17: 18: 19: 20: 21: 22: 23: 24: 25: 26: 27: 28: 29: 30: 31: 32: 33: 34: 35: 36: 37: 38: 39: 40: 41: 42: 43: 44: 45: 46: 47: 48: 49: 50: 51: 52: 53: 54: 55: 56: 57: 58: 59: 60: 61: 62: 63: 64: 65: 66: 67: 68: 69: 70: 71: 72: 73: 74: 75: 76: 77: 78: 79: 80: 81: 82: 83: 84: 85: 86: 87: 88: 89: 90: 91: 92: 93: 94: 95: 96: 97: 98: 99: </pre>	<pre> 1: 2: 3: 4: 5: 6: 7: 8: 9: 10: 11: 12: 13: 14: 15: 16: 17: 18: 19: 20: 21: 22: 23: 24: 25: 26: 27: 28: 29: 30: 31: 32: 33: 34: 35: 36: 37: 38: 39: 40: 41: 42: 43: 44: 45: 46: 47: 48: 49: 50: 51: 52: 53: 54: 55: 56: 57: 58: 59: 60: 61: 62: 63: 64: 65: 66: 67: 68: 69: 70: 71: 72: 73: 74: 75: 76: 77: 78: 79: 80: 81: 82: 83: 84: 85: 86: 87: 88: 89: 90: 91: 92: 93: 94: 95: 96: 97: 98: 99: </pre>
Cfl->NPV: cashflowlist, interest to net present, future value, internal rate of return, Baldwin interest (1.5s)	<pre> 0: 1: 2: 3: 4: 5: 6: 7: 8: 9: 10: 11: 12: 13: 14: 15: 16: 17: 18: 19: 20: 21: 22: 23: 24: 25: 26: 27: 28: 29: 30: 31: 32: 33: 34: 35: 36: 37: 38: 39: 40: 41: 42: 43: 44: 45: 46: 47: 48: 49: 50: 51: 52: 53: 54: 55: 56: 57: 58: 59: 60: 61: 62: 63: 64: 65: 66: 67: 68: 69: 70: 71: 72: 73: 74: 75: 76: 77: 78: 79: 80: 81: 82: 83: 84: 85: 86: 87: 88: 89: 90: 91: 92: 93: 94: 95: 96: 97: 98: 99: </pre>	<pre> NPV: 50520.12 NFV: 73966.6 I%YR: 12.76 IBaldwin: 12.05 </pre>
second exmple (1.5s)	<pre> 0: 1: 2: 3: 4: 5: 6: 7: 8: 9: 10: 11: 12: 13: 14: 15: 16: 17: 18: 19: 20: 21: 22: 23: 24: 25: 26: 27: 28: 29: 30: 31: 32: 33: 34: 35: 36: 37: 38: 39: 40: 41: 42: 43: 44: 45: 46: 47: 48: 49: 50: 51: 52: 53: 54: 55: 56: 57: 58: 59: 60: 61: 62: 63: 64: 65: 66: 67: 68: 69: 70: 71: 72: 73: 74: 75: 76: 77: 78: 79: 80: 81: 82: 83: 84: 85: 86: 87: 88: 89: 90: 91: 92: 93: 94: 95: 96: 97: 98: 99: </pre>	<pre> NPV: 32485.07 NFV: 44135.52 I%YR: 21.26 IBaldwin: 15.27 </pre>
Invex: example for Invest	<pre> 0: 1: 2: 3: 4: 5: 6: 7: 8: 9: 10: 11: 12: 13: 14: 15: 16: 17: 18: 19: 20: 21: 22: 23: 24: 25: 26: 27: 28: 29: 30: 31: 32: 33: 34: 35: 36: 37: 38: 39: 40: 41: 42: 43: 44: 45: 46: 47: 48: 49: 50: 51: 52: 53: 54: 55: 56: 57: 58: 59: 60: 61: 62: 63: 64: 65: 66: 67: 68: 69: 70: 71: 72: 73: 74: 75: 76: 77: 78: 79: 80: 81: 82: 83: 84: 85: 86: 87: 88: 89: 90: 91: 92: 93: 94: 95: 96: 97: 98: 99: </pre>	<pre> investment cashFlow: -660000. 12 restvalue: 330000. interest: 10. tax: 40 int.am.: 8 debt: 198000 </pre>
[OK] calls Invest, to calculate investment	<pre> 0: 1: 2: 3: 4: 5: 6: 7: 8: 9: 10: 11: 12: 13: 14: 15: 16: 17: 18: 19: 20: 21: 22: 23: 24: 25: 26: 27: 28: 29: 30: 31: 32: 33: 34: 35: 36: 37: 38: 39: 40: 41: 42: 43: 44: 45: 46: 47: 48: 49: 50: 51: 52: 53: 54: 55: 56: 57: 58: 59: 60: 61: 62: 63: 64: 65: 66: 67: 68: 69: 70: 71: 72: 73: 74: 75: 76: 77: 78: 79: 80: 81: 82: 83: 84: 85: 86: 87: 88: 89: 90: 91: 92: 93: 94: 95: 96: 97: 98: 99: </pre>	<pre> cashflowlist? EDIT  OK </pre>
[OK] choose financial model	<pre> 0: 1: 2: 3: 4: 5: 6: 7: 8: 9: 10: 11: 12: 13: 14: 15: 16: 17: 18: 19: 20: 21: 22: 23: 24: 25: 26: 27: 28: 29: 30: 31: 32: 33: 34: 35: 36: 37: 38: 39: 40: 41: 42: 43: 44: 45: 46: 47: 48: 49: 50: 51: 52: 53: 54: 55: 56: 57: 58: 59: 60: 61: 62: 63: 64: 65: 66: 67: 68: 69: 70: 71: 72: 73: 74: 75: 76: 77: 78: 79: 80: 81: 82: 83: 84: 85: 86: 87: 88: 89: 90: 91: 92: 93: 94: 95: 96: 97: 98: 99: </pre>	<pre> 4: 5: 6: 7: 8: 9: 10: 11: 12: 13: 14: 15: 16: 17: 18: 19: 20: 21: 22: 23: 24: 25: 26: 27: 28: 29: 30: 31: 32: 33: 34: 35: 36: 37: 38: 39: 40: 41: 42: 43: 44: 45: 46: 47: 48: 49: 50: 51: 52: 53: 54: 55: 56: 57: 58: 59: 60: 61: 62: 63: 64: 65: 66: 67: 68: 69: 70: 71: 72: 73: 74: 75: 76: 77: 78: 79: 80: 81: 82: 83: 84: 85: 86: 87: 88: 89: 90: 91: 92: 93: 94: 95: 96: 97: 98: 99: </pre>
[OK] calculates Investment	<pre> 0: 1: 2: 3: 4: 5: 6: 7: 8: 9: 10: 11: 12: 13: 14: 15: 16: 17: 18: 19: 20: 21: 22: 23: 24: 25: 26: 27: 28: 29: 30: 31: 32: 33: 34: 35: 36: 37: 38: 39: 40: 41: 42: 43: 44: 45: 46: 47: 48: 49: 50: 51: 52: 53: 54: 55: 56: 57: 58: 59: 60: 61: 62: 63: 64: 65: 66: 67: 68: 69: 70: 71: 72: 73: 74: 75: 76: 77: 78: 79: 80: 81: 82: 83: 84: 85: 86: 87: 88: 89: 90: 91: 92: 93: 94: 95: 96: 97: 98: 99: </pre>	<pre> NPV: 41023.26 I%YR: 8.77 IBaldwin: 8.28 </pre>

GrfNPV: graph of net present value function of $q=1+i$ with same example as before	<div> <div> Choose Financial Model  1 var,short,const,paym  2 const,short,var,paym  3 const,short,int-debt  4 int + debt at end  5 int/yr,debt at end </div> <div> CANCEL OK </div> </div>	
[OK] shows graph	<div> <div> FINANCE Financial mathematics  TVMex - + - examples for TVM stores values in TVM vars and starts TVM  TVM time value of Money with different no. of interest periods I/YR and payments PYR / year delete variable to be solved for with DEL calc. interest = nominal  GRAPH </div> <div> CANCEL OK </div> </div>	<div> <div> ZOOM CH,PD TRACE FCH EDIT CANCEL </div> </div>
HelpFinance: helpfile	<div> <div> FINANCE Financial mathematics  TVMex - + - examples for TVM stores values in TVM vars and starts TVM  TVM time value of Money with different no. of interest periods I/YR and payments PYR / year delete variable to be solved for with DEL calc. interest = nominal  GRAPH </div> <div> CANCEL OK </div> </div>	<div> <div> IXIEFF :IZYR: I1 ↔ :IEFFZYR: I2 nominal ↔ effective int. :FV: V1 ↔ :PV: V2 future ↔ present value  Intconv interest conversion nominal int. + effective, periodic, continuous int. press OK to obtain result stores example for Irpaym in PV FV PYR IRPMT. calls Irpaym  Irpex calculate FV FV or IZYR  GRAPH </div> <div> CANCEL OK </div> </div>
HelpFinance: helpfile	<div> <div> Irpaym calculate PV FV or IZYR for irregular payments key in values for PV FV PYR or IZYR delete variable to be solved for with DEL, then key in Matrix [PMT number of PMT] press OK to obtain PV FV or IZYR. press IXIEFF to obtain IEFFZYR  VCex - + D N IZ ex for V-Cmort  GRAPH </div> <div> CANCEL OK </div> </div>	<div> <div> VCex - + D N IZ ex for V-Cmort  Vmort D N IZ + I1 variable amortisation (const,paym.) Debt, No.years, Interest% + [Year Rest Amortisation Interest Payment]  Cmort D N IZ + I1 constant amortisation (var,paym.) Debt, No.years, Interest% + [Year Rest Amortisation Interest Payment]  Mamex - + D IZ AZ ex for Mamort  GRAPH </div> <div> CANCEL OK </div> </div>
HelpFinance: helpfile	<div> <div> Mamex - + D IZ AZ ex for Mamort  Mamort D IZ AZ + I1 Mortgage amortisation (const,paym.) Debt, Interest%, Am.int.% AZ gives amortisation in the first year  Cashex - + - examples Cashflow  CashFlow interactive program for irregular payments: ENTER IZYR-PYR then edit Matrix IRPMT: Flow1, number1  GRAPH </div> <div> CANCEL OK </div> </div>	<div> <div> CashFlow interactive program for irregular payments: ENTER IZYR-PYR then edit Matrix IRPMT: Flow1, number1  Flow2, number2  + NPV NPV PMT IRZYR net present future value, stored in PV FV, payment, internal rate of return. IZYR is startvalue for determination of IRZYR  GRAPH </div> <div> CANCEL OK </div> </div>
HelpFinance: helpfile	<div> <div> CFlex - + {cf1} i choose example for CFI-MPV {cf1} i(%) + {cf1} i NPV NPV IRZYR IRZYR cashflow, interest to net present value, net future value, internal rate of return, Baldwin interest  Invex - + - examples for Invest stores values in variables and starts Invest  GRAPH </div> <div> CANCEL OK </div> </div>	<div> <div> Invest - + I1 NPV NPV IRZYR IRZYR calculate investment table extraordinary Min/loss is added to cn. Table vars: cf =c0 c1..cn3 cashflow ru restvalue of writeoff wo =(c0-cu)/n writeoff id interest amortisation tx tax wbt Min before tax wat Min after tax pa payment amortisation  GRAPH </div> <div> CANCEL OK </div> </div>
HelpFinance: helpfile	<div> <div> wat Min after tax  pa payment amortisation  cft cashflow after tax  GrfNPV - + - graph of NPV(q)  Root 'T' (x0) + xr T-term with 1 var, xr = root near 1.2 (x0)  Tval 'T' x0 + T(x0) term value  ResetVar - + - reset TVM vars  TVMroot 'V' + Vsol solves for the TVM variable 'V'  GRAPH </div> <div> CANCEL OK </div> </div>	<div> <div> PurgeVar - + - purge global vars  TVM VARIABLES:  N number of payments  IZYR interest per year in %  PV present value  PMT payment amount  FV future value  PYR payments per year  IYR interest periods per year  IRPMT irregular payments [I1]  GRAPH </div> <div> CANCEL OK </div> </div>