### 1.1 ASSUMPTIONS >A16

2.1 SOLUTIONS >A47
3.1 INSTRUCTIONS >A58

INTERNAL RATE OF RETURN WORKSHEET

| Year | Investment | Annual Cash <br> Inflows |
| :---: | :---: | :---: |
| 1983 | \$41500.00 |  |
| 1984 |  | \$3194.00 |
| 1985 |  | \$4014.00 |
| 1986 |  | \$4539.00 |
| 1987 |  | \$4890.00 |
| 1988 |  | \$5272.00 |
| 1989 |  | \$5598.00 |
| 1990 |  | \$5926.00 |
| 1991 |  | \$6261.00 |
| 1992 |  | \$6707.00 |
| 1993 |  | \$7086.00 |
| 1994 |  | \$7738.00 |
| 1995 |  | \$8163.00 |
| 1996 |  | \$8614.00 |
| 1997 |  | \$9090.00 |
| 1998 |  | \$9596.00 |
| 1999 |  | \$10132.00 |
| 2000 |  | \$10700.00 |
| 2001 |  | \$11302.00 |
| 2002 |  | \$11941.00 |
| 2003 |  | \$96741.00 |

## FINANCIAL RESULTS:

Input Rate

Internal Rate of Return

Discounted Rate of Return (using Input Rate) Rate)
Net Present Value at Input Rate
NPV would $=0$ if Input Rate
were equal to IRR

## INSTRUCTIONS

## Enter ASSUMPTIONS >A16

2) Enter guess of IRR at $>\mathrm{F} 47$

I Calculate by pressing F9 key
4) PRINT by pressing/PPG

The Discounted Rate of Return (DRR) corrects a theoretical flaw in the IRR calculation. The IRR calculation effectively assumes that the cash inflows over the analysis period are reinvested at the discovered IRR rate. When the IRR rate goes above a realistically achievable rate, say, $15 \%$, it may not be possible to achieve such high percentage earnings by reinvesting the cash inflows in other projects or ventures. The DRR uses the Input Rate as the Reinvestment Rate. The cash flows in column G are reinvested at the Input Rate, with the result printed in column H. The rate which makes the sum of column H equal the investment, is the Discounted Rate of Return.

$\qquad$

18 April 21

| Net <br> Cash <br> Flows | Present <br> Values | Future Values of Inflows at Input Rate |
| :---: | :---: | :---: |
| -\$41500.00 | -\$41500.00 |  |
| \$3194.00 | \$2778.36 | \$27509.16 |
| \$4014.00 | \$3037.29 | \$30867.52 |
| \$4539.00 | \$2987.60 | \$31164.96 |
| \$4890.00 | \$2799.79 | \$29977.63 |
| \$5272.00 | \$2625.71 | \$28856.64 |
| \$5598.00 | \$2425.26 | \$27358.06 |
| \$5926.00 | \$2233.27 | \$25858.06 |
| \$6261.00 | \$2052.48 | \$24392.71 |
| \$6707.00 | \$1912.57 | \$23330.64 |
| \$7086.00 | \$1757.70 | \$22008.04 |
| \$7738.00 | \$1669.65 | \$21458.08 |
| \$8163.00 | \$1532.15 | \$20211.29 |
| \$8614.00 | \$1406.41 | \$19042.81 |
| \$9090.00 | \$1290.99 | \$17942.05 |
| \$9596.00 | \$1185.51 | \$16911.43 |
| \$10132.00 | \$1088.84 | \$15942.90 |
| \$10700.00 | \$1000.25 | \$15032.73 |
| \$11302.00 | \$919.04 | \$14177.23 |
| \$11941.00 | \$844.64 | \$13373.92 |
| \$96741.00 | \$5952.47 | \$96741.00 |
| -- | ---------- | --------- |
| \$196004.00 | \$0.00 | \$522156.84 |

$12.0000 \%$
14.9597\%
13.4979\%
\$11277.06

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