Financial Functions

DDB(cst,slvg,life,per)
Returns the Double Declining Balance depreciation for an asset that cost cst, has a salvage value of slvg, a life of life in period per.
A company buys a delivery van for $12,000.   It has a useful life of 5 years and will be worth $2,000 at the end of that time.   How much depreciation can the company write off in years 1,2 and 3?
     year 1:   DDB(12000,2000,5,1) = $4,800
     year 2:   DDB(12000,2000,5,2) = $2,880
     year 3:   DDB(12000,2000,5,3) = $1,728

FV(rate,pers,pmt[,pv[,type]])
Returns the Future value of a stream of payments over pers periods at rate interest rate. If pv is not specified, it is assumed to be 0. Type designates when the payments start.
If $2,000 were deposited every year into an account earning 9% annual interest, how much would the account be worth in 20 years?

     FV(9%,20,-2000) = $102,320.24

If a $50,000 were deposited instead and accrued 9% interest from the start of the year, what would the account be worth in 20 years?

     FV(9%,20,,-50000,1) = $ 280,220.54

IRR(guess,num|range[,...])
Calculates the internal rate of return of an investment.
A rug-cleaning business is being offered for sale for $180,000.   The owner says the business should net $25,000, $35,000, $39,000, $40,000 and $55,000 in years 1-5.   What is this project's internal rate of return?

	A
1	-180000
2	25000
3	35000
4	39000
5	40000
6	55000

The initial expense is entered as a negative number in cell A1.   The range of cash inflows are given in cells A2:A6.   To calculate this project's IRR value:

     IRR(B1,A1:A6) = 0.023%

NPV(rate,pmt1[,pmt2[,...]])
Computes the Net Present Value of an investment with a given stream of income at a given interest rate. Each payment can be a value or a range. If it is a range, each of the numbers in the range is included in the calculation.
An apartment is being offered for sale for $400,000.   Expected rental incomes for years 1-5 are $79,000, $85,000, $85,000, $103,000 and $120,000 and the interest rate is expected to stay close to 7%.   Is this a worthwhile

investment?

	A
1	-400000
2	79000
3	85000
4	85000
5	103000
6	120000

To figure out the net present value of the cash in-flows:

    NPV(7%,A2:A6) = $381,595

To figure out the value of the project:

    Project Value = Initial Cost + NPV

        = +A1+NPV(7%,A1:A5)

        = -18,404

No, this project is not worthwhile.

PMT(rate,pers,pv[,fv[,type]])
Calculates the payment required for a loan payoff.
What would be the monthly payment on an $40,000 home improvement loan, to be repaid in 5 years at a fixed rate of 9%?

    PMT(9%/12,5*12,-40000) = $830.33 per month.

PV(rate,pers,pmnt[,fv[,type]])
Computes the present value of an investment with a given interest rate, number of periods, and periodic payment. If a future value is not given, it is assumed to be 0. If type is not zero, payments are assumed to start in the next period.
What is the present value of the retirement annuity which promises to pay $30,000 every year for the next 20 years, given an interest rate of 12%?

    PV(12%,20,-30000) = $224,083.31

What is the present value of the investment which promises to pay $225,000 at the end of 20 years, given an interest rate of 12%?

    PV(12%,20,,-225000) = $23,325.02

SLN(cst,slvg,life)
Returns the straight-line depreciation of an asset that cost cst, has a salvage value of slvg, and a life of life.
A company buys a delivery van for $12,000.   It has a useful life of 5 years and will be worth $2,000 at the end of that time.   How much depreciation can the company write off each year?

    SLN(12000,2000,5) = $2,000

SYD(cst,slvg,life,per)

Returns the Sum of the Years Digits depreciation for an asset that cost cst, has a salvage value of slvg, a life of life in period per.

A company buys a delivery van for $12,000.   It has a useful life of 5 years and will be worth $2,000 at the end of that time.   How much depreciation can the company write off in years 1,2 and 4?

year 1:   SYD(12000,2000,5,1) = $3,333
year 2:   SYD(12000,2000,5,2) = $2,667
year 4:   SYD(12000,2000,5,4) = $1,333