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A net present value is the sum of a series of separate present value calculations. A net present value calculation, for example, is used to determine the present value of a stream of income payments from a life income plan.

An payment's present value is the equivalent value of a payment in today's dollars, given its value at a specific time in the future. The equation for computing present value is:

PV = FV / (1 + R) ^n

Where,

PV = present value

FV = future value

R = assumed interest rate

n = number of years into future

The equation for computing a net present value is:

NPV = PV1 + PV2 + PV3 + . . . + PVn

Where

PV<num> = present value of that payment (PV1 is the present value of the first payment, for example)

PVn = present value of the last payment

For example, assume you expect to receive $200,000 in two $100,000 installments, one in 10 years and one in 15 years. You want to know what amount would have the equivalent buying power in today's dollars. Based on an assumed annual inflation rate of 4% per year, the present value of the two payments is:

NPV = 100,000 / (1 + .04)^10 + 100,000 / (1 + .04)^15

NPV = $67,556 + $55,526 = $123,082

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