

SIX FUNCTIONS OF A DOLLAR

MOST COMMON USES

Personal Finance Applications
Investment Valuation Applications

FUNCTION	MOST COMMON USE	FORMULA
Future Value	<p>Project Savings and Costs: How many nominal dollars will I save in the future if I make a one-time deposit today? (e.g. savings bond) How many nominal dollars will something cost in the future considering inflation? (e.g. children going to college)</p> <p>Project Value of Investment: What is the future market value of an investment if it earns a one-time payment at a fixed date in the future (e.g. bond strip)?</p>	$FV = PV \cdot (1 + i)^n$
Present Value	<p>Establish Amount To Invest: What amount do I need to invest today to meet a future savings target? (e.g. a down payment for a house, retirement, college)</p> <p>Determine Investment Value: What is the current market value of an investment if I receive a one-time fixed payment in the future? (e.g. bond strip)</p>	$PV = FV \cdot \frac{1}{(1 + i)^n}$
Future Value of An Annuity	<p>Project Savings: How much will be saved by a certain date if I save a fixed amount every period? (e.g. regular deductions from pay check)</p>	$FV = PMT \cdot \left(\frac{(1 + i)^n - 1}{i} \right)$
Present Value of An Annuity	<p>Establish Borrowing Limits: How much can I borrow given a fixed periodic payment? (e.g. determine budget for a car or house)?</p> <p>Determine Investment Value: What is the current market value of an investment that makes a regular payment for a fixed period of time? (e.g. lottery winner, one-time pay-out versus annual payments)</p>	$PV = PMT \cdot \left(\frac{(1 + i)^n - 1}{i(1 + i)^n} \right)$
Amortization of Future Value (AKA Sinking Fund Factor)	<p>Project Regular Savings Targets: How many nominal dollars will I need to save each period to meet a personal savings goal (e.g. retirement, a down payment for a house, or college)?</p>	$PMT = FV \cdot \left(\frac{i}{(1 + i)^n - 1} \right)$
Amortization of Present Value	<p>Establish Loan Payments: What will be the payment for a loan of a fixed amount at a fixed interest rate? (e.g. buy a house car)</p> <p>Determine Investment Value: What is the current market value of an investment that earns a fixed regular payment for a fixed period of time? (e.g. bonds, savings accounts)</p>	$PMT = PV \cdot \left(\frac{i(1 + i)^n}{(1 + i)^n - 1} \right)$

SIX FUNCTIONS OF A DOLLAR
MOST COMMON USES

Personal Finance Applications
Investment Valuation Applications

FUNCTION	MOST COMMON USE	FORMULA