Inflation: Future Cost and Real Interest Rate (Fisher)

Future price of a present cost at an inflation rate, and the real interest rate from a nominal rate and inflation by the Fisher relation.

Method: Future cost C(1 + f)^n; Fisher (1 + i) = (1 + i_r)(1 + f)

Input parameters

Unit system: SI

Parameter	Value	Unit
Present cost	5,000,000	
Inflation rate	5.0000	%
Years	8.0000	
Nominal interest rate	10.000	%

Calculated results

Parameter	Value	Unit
Future cost	7,387,277	
Real interest rate	4.7619	%
Purchasing power of 1 after n years	67.684	%

Formula and method

$$C_n = C(1+f)^n, \quad i_r = \frac{1+i}{1+f} - 1$$

Variables

C	Present cost	-
f	Inflation rate	-
n	Years	-
i	Nominal interest rate	-
C_n	Future cost	-
i_r	Real interest rate	-
PP	Purchasing power of 1 after n years	-

Method and standards

Fisher relation.

Assumptions and limits

- Constant rates.

References

- Future cost C(1 + f)^n; Fisher (1 + i) = (1 + i_r)(1 + f)

Report details

Report reference	FCC-3602-SZKC (the same inputs always give the same reference)
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Release checks	2 reference cases of this calculator, computed independently, are checked on every release

Results are for engineering estimation. Verify critical designs against the referenced standards and your own data.

This calculator online

https://calc.firecad.com/general/economics/inflation-real-rate

Open this case on calc.firecad.com →

Reopens the calculator with the inputs of this report.