



Present and Future Value

Present and Future Value

$$FV = PV * (1 + i)^n$$

Present Value



One simple equation



Start with some kind of
cash flow in the future



Application

FV

FINANCIALEDGE⁷

Present Value



One simple equation



How far into the
future?



Application

n = years

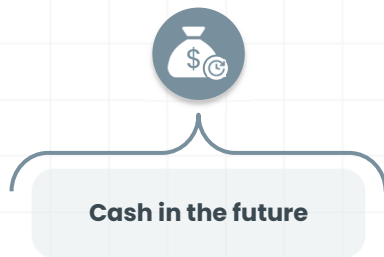
FV

FINANCIALEDGE⁷

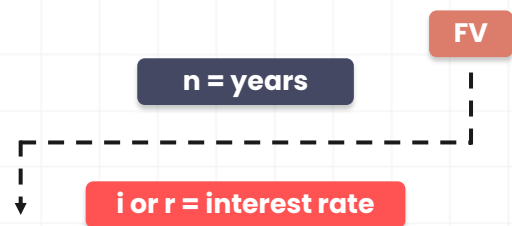
Present Value



One simple equation



Application

FINANCIALEDGE⁷

Present Value



One simple equation

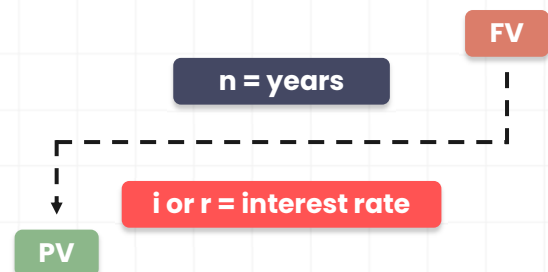
Simple equation to calculate present value:

$$PV = FV * \frac{1}{(1 + r)^n}$$

In excel, use the **PV function**



Application

FINANCIALEDGE⁷

Present Value



One simple equation



Computer

$r = \text{Interest rate}$

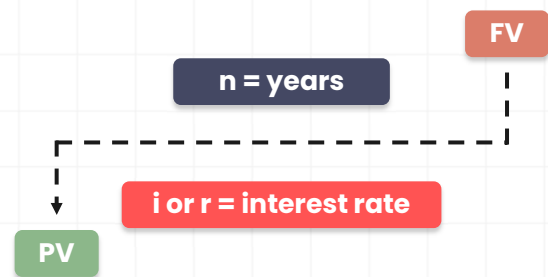


Calculator

$i = \text{Interest rate}$



Application



FINANCIALEDGE⁷

Present Value



One simple equation



Computer

$r = \text{Interest rate}$

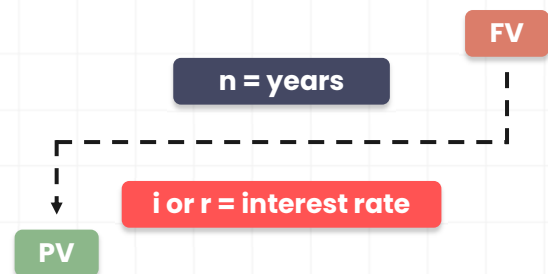


Calculator

$i = \text{Interest rate}$



Application



FINANCIALEDGE⁷

Present Value

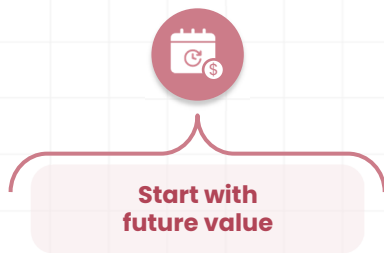


One simple equation



Application

How much should be **invested now** at **8%** to get **100** in **ten years time**?



FINANCIALEDGE⁷

Present Value

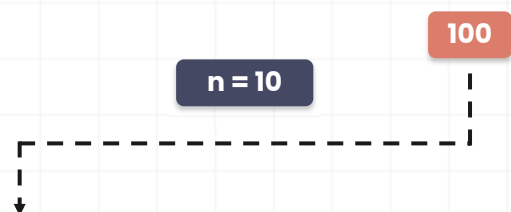
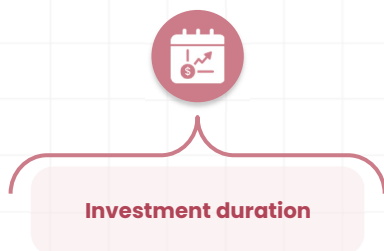


One simple equation



Application

How much should be **invested now** at **8%** to get **100** in **ten years time**?



FINANCIALEDGE⁷

Present Value



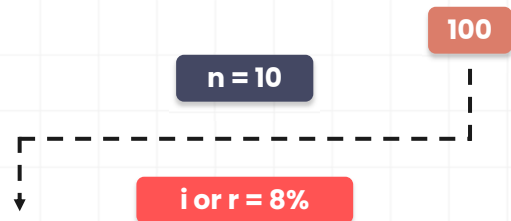
One simple equation



Application

How much should be **invested now** at **8%** to get **100** in **ten years time**?

What's the **interest rate**?



FINANCIALEDGE⁷

Present Value



One simple equation



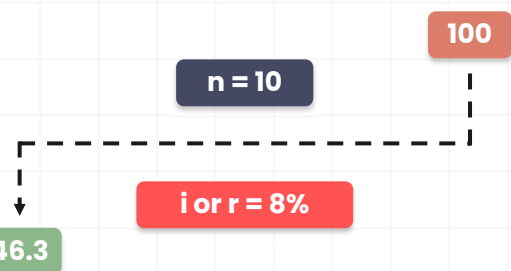
Application

How much should be **invested now** at **8%** to get **100** in **ten years time**?

Equation:

$$PV = 100 * \frac{1}{(1 + 8\%)^{10}}$$

In excel =PV(0.08,10,0,100)



FINANCIALEDGE⁷

Present Value



One simple equation



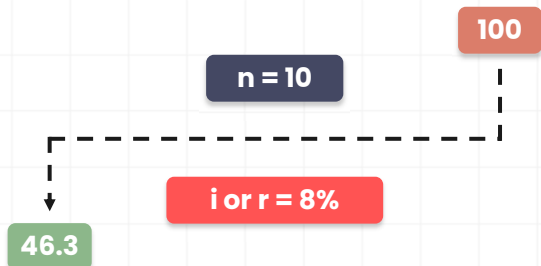
Application

How much should be **invested now** at **8%** to get **100** in **ten years time**?

Equation:

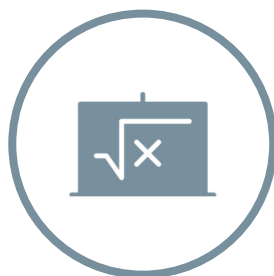
$$PV = 100 * \frac{1}{(1 + 8\%)^{10}}$$

In excel =PV(0.08,10,0,100)

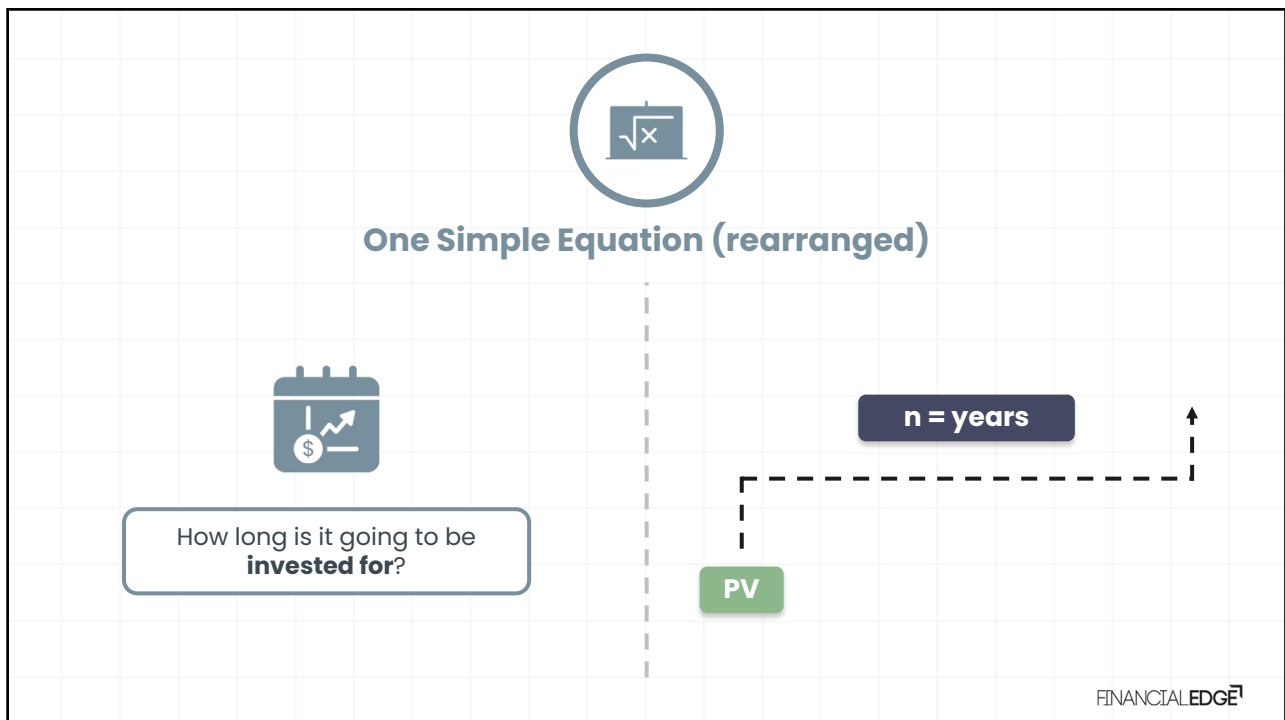
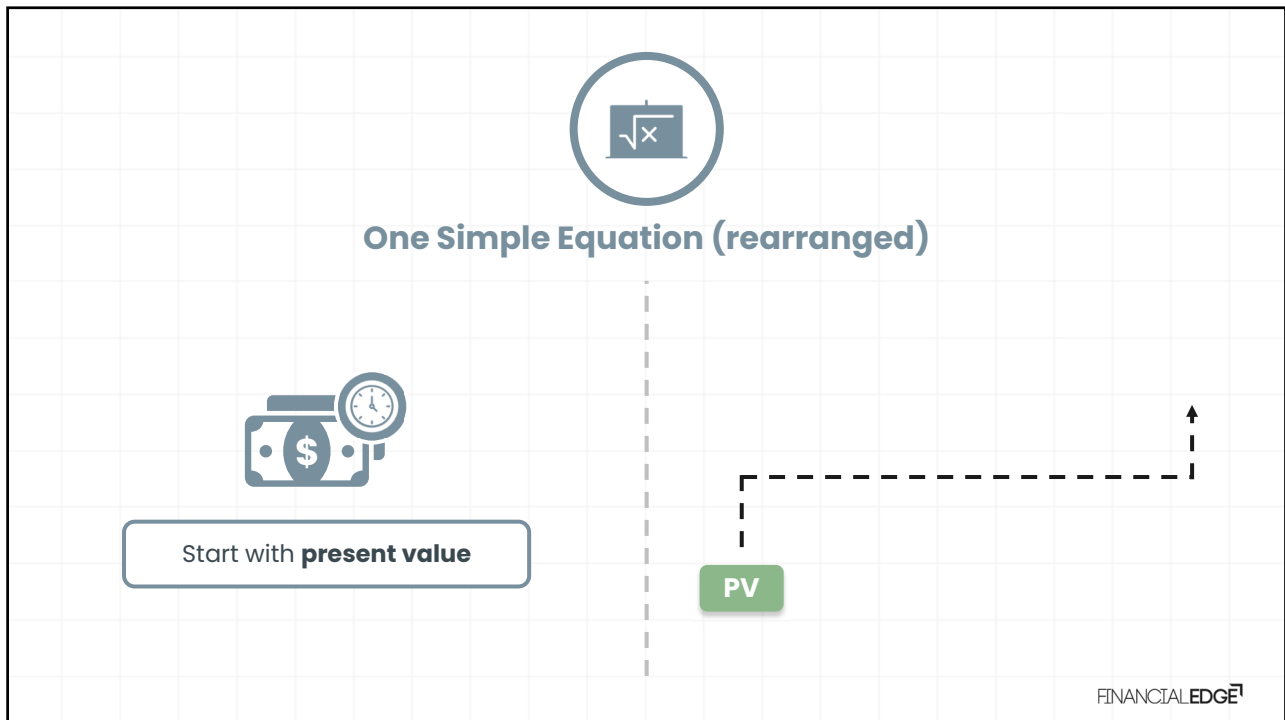


FINANCIALEDGE⁷

Future Value



FINANCIALEDGE⁷

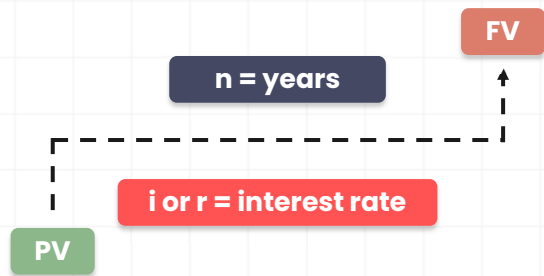




One Simple Equation (rearranged)



What **interest rate** or
rate of return?

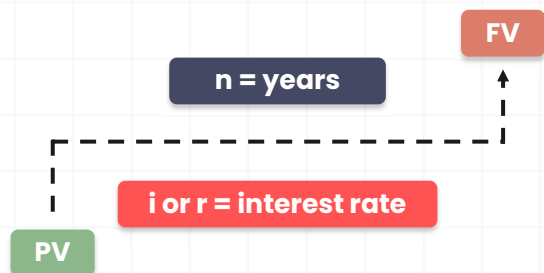
FINANCIALEDGE⁷

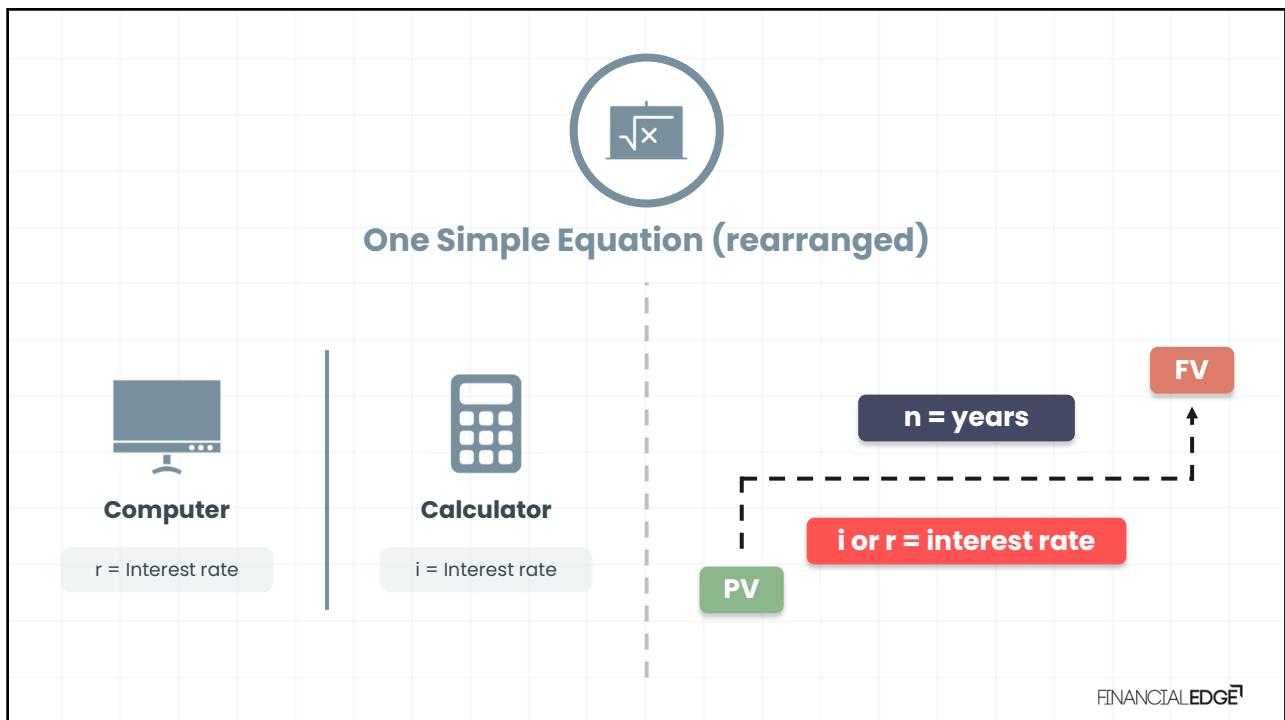
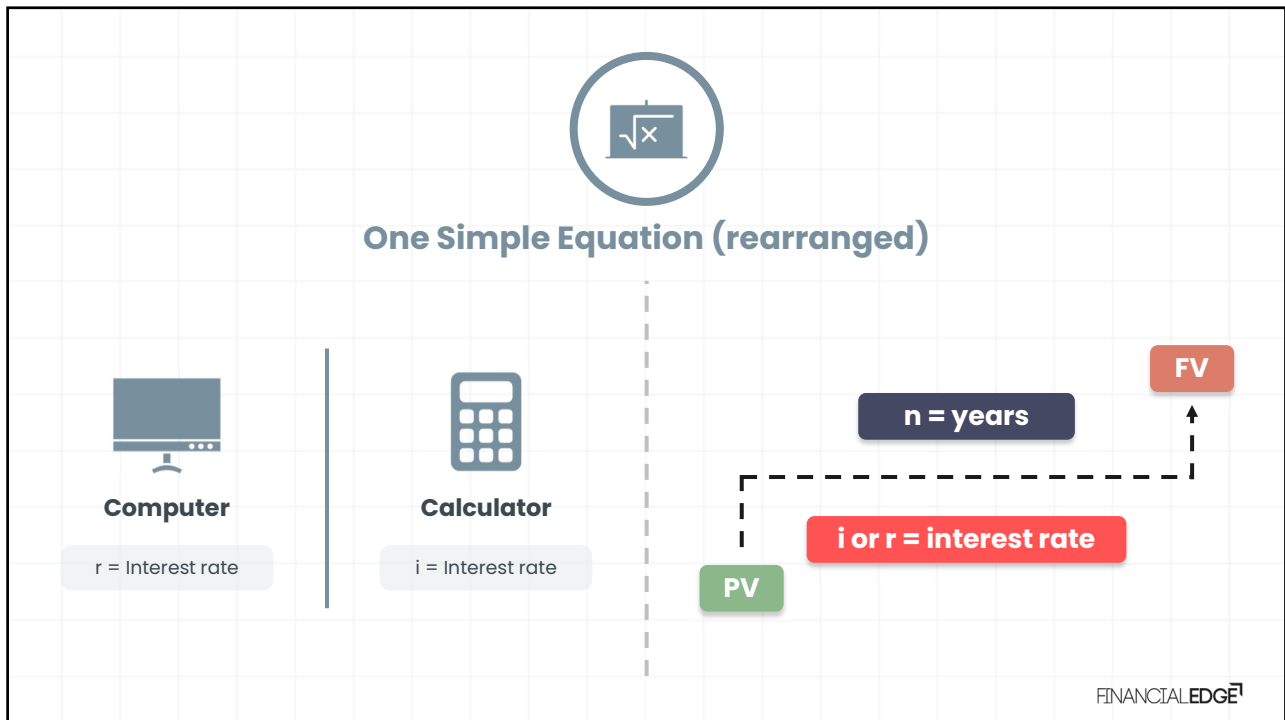
One Simple Equation (rearranged)

Equation:

$$FV = PV * (1 + r)^n$$

In excel, use the **FV function**

FINANCIALEDGE⁷



Future Value



Application

If **100** is **invested** now at **8%** how much will it be worth in **10 years time**?



Start with **present value**

100



Application

If **100** is **invested** now at **8%** how much will it be worth in **10 years time**?



It's going to be invested
for **10 years**

100

$n = 10$

FINANCIALEDGE⁷



Application

If **100** is **invested** now at **8%** how much will it be worth in **10 years time**?



What **interest rate** or **rate
of return**?

100

$n = 10$

$i \text{ or } r = 8\%$

FINANCIALEDGE⁷



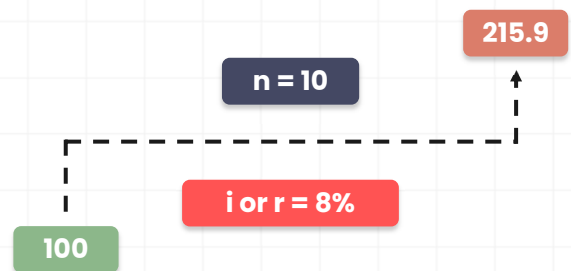
Application

If **100** is **invested** now at **8%** how much will it be worth in **10 years time**?

Equation:

$$FV = 100 * (1 + 8\%)^{10}$$

In excel =FV(0.08,10,0,100)



FINANCIALEDGE⁷



Application

If **100** is **invested** now at **8%** how much will it be worth in **10 years time**?

Computer

FV = Future value

PV = Present value

r = Interest rate

N = Number of years

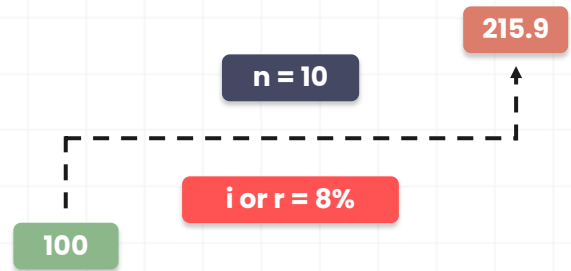
Calculator

100 = PV

8 = i

10 = n

FV Enter = 215.9



FINANCIALEDGE⁷

FINANCIALEDGE⁷
www.FE.training

Please do not redistribute these materials without the
express permission of Financial Edge Training.