

P = PREZZO

C = CEDOLA

i = RENDIMENTO

1

$$P = \frac{C}{1+i} + \frac{C}{(1+i)^2} + \frac{C}{(1+i)^3} + \dots + \frac{C}{(1+i)^N} + \frac{100}{(1+i)^N}$$

$$P = C \cdot \left[\frac{1}{1+i} + \frac{1}{(1+i)^2} + \frac{1}{(1+i)^3} + \dots + \frac{1}{(1+i)^N} \right] + \frac{100}{(1+i)^N}$$

$$P = C \cdot \sum_{k=1}^N \left(\frac{1}{1+i} \right)^k + \frac{100}{(1+i)^N}$$

SAPPIAMO CHE $\sum_{k=1}^N X^k = \frac{X - X^{N+1}}{1 - X}$

$$P = C \cdot \frac{\frac{1}{1+i} + \frac{1}{(1+i)^{N+1}}}{1 - \frac{1}{1+i}} + \frac{100}{(1+i)^N}$$

$$P = C \cdot \frac{\frac{(1+i)^N + 1}{(1+i)^{N+1}}}{\frac{1+i - 1}{1+i}} + \frac{100}{(1+i)^N}$$

$$P = C \cdot \frac{(1+i)^N + 1}{(1+i)^{N+1}} \cdot \frac{1+i}{i} + \frac{100}{(1+i)^N}$$

$$P = C \cdot \frac{(1+i)^N + 1}{(1+i)^N \cdot i} + \frac{100}{(1+i)^N}$$

$$P = \frac{C}{i} \left(1 + \frac{1}{(1+i)^N} \right) + \frac{100}{(1+i)^N}$$

$$CF \quad C=2 \quad i=3\% \quad N=5$$

2

$$P = \frac{2}{0,03} \cdot \left(1 - \frac{1}{1,03^5}\right) + \frac{100}{1,03^5} = \underbrace{9,33}_{\text{COPOLE}} + \underbrace{86,26}_{\text{CAPITALE RITORTO}}$$

$$P = 95,59$$

RICAVARE i CONOSCIAMO P INVECE NON

È POSSIBILE ANALITICAMENTE ~~SE~~ ~~NON~~

BISOGNA RISOLVERLO USANDO ALGORITMI DI APPROSSIMAZIONE