

# FÓRMULAS CAPITALIZACIÓN SIMPLE

## Réditos y Tipos de Interés

$$1. r = \frac{C_2 - C_1}{C_1} \quad 2. i = \frac{r}{t_2 - t_1} = \frac{C_2 - C_1}{C_1 \cdot (t_2 - t_1)}$$

## Capitalización Simple

$$3. C_n = C_0 \cdot (1 + n \cdot i) \quad 4. C_n = C_0 + I_n \quad 5. I_n = C_0 \cdot n \cdot i$$

$$6. i = \frac{C_n - C_0}{C_0 \cdot n} \quad 7. n = \frac{\frac{C_n}{C_0} - 1}{i} \quad 8. i = i_k \cdot k$$

## Descuento Racional

$$9. D_r = C_0 \cdot n \cdot i \quad 10. D_r = \frac{C_n \cdot n \cdot i}{1 + n \cdot i}$$

$$11. D_r = C_n - C_0 \quad 12. C_0 = \frac{C_n}{1 + n \cdot i}$$

## Descuento Comercial

$$13. D_c = C_n \cdot n \cdot d \quad 14. D_c = C_n - C_0$$

$$15. C_0 = C_n \cdot (1 - n \cdot d)$$

## Tanto de Interés y Descuento Equivalentes

$$16. d = \frac{i}{1 + n \cdot i} \quad 17. i = \frac{d}{1 - n \cdot d}$$

## Equivalencia de Capitales Capital Común

Descuento Racional: Mto. 0

$$18. C = \sum_{s=1}^n \frac{C_s}{1 + t_s \cdot i} \cdot (1 + t \cdot i)$$

Descuento Comercial: Mto. t

$$19. C = \sum_{s=1}^p C_s \cdot (1 + (t - t_s) \cdot i) + \sum_{s=q}^z \frac{C_s}{1 + (t_s - t) \cdot i}$$

$s = 1, \dots, p \Rightarrow t_s < t$   
 $s = q, \dots, z \Rightarrow t_s > t$

Descuento Comercial: Mto. 0

$$20. C = \sum_{s=1}^p C_s \cdot (1 + (t - t_s) \cdot i) + \sum_{s=q}^z C_s \cdot (1 - (t_s - t) \cdot d)$$

$s = 1, \dots, p \Rightarrow t_s < t$   
 $s = q, \dots, z \Rightarrow t_s > t$

$$21. C = \frac{\sum_{s=1}^n C_s \cdot (1 - t_s \cdot d)}{1 - t \cdot d}$$

## Vencimiento Común

$$C \neq C_1 + C_2 + \dots + C_n$$

Descuento Racional

$$22. t = \frac{\frac{C}{\sum_{s=1}^n \frac{C_s}{1 + t_s \cdot i}} - 1}{i}$$

Descuento Comercial

$$23. t = \frac{C - \sum_{s=1}^n C_s + d \cdot \sum_{s=1}^n C_s \cdot t_s}{C \cdot d}$$

## Vencimiento Medio

$$C = C_1 + C_2 + \dots + C_n$$

Descuento Racional

$$24. t = \frac{\frac{\sum_{s=1}^n C_s}{\sum_{s=1}^n \frac{C_s}{1 + t_s \cdot i}} - 1}{i}$$

Descuento Comercial

$$25. t = \frac{\sum_{s=1}^n C_s \cdot t_s}{C}$$

# FÓRMULAS CAPITALIZACIÓN COMPUESTA

## Capitalización Compuesta

$$1. C_n = C_0 \cdot (1+i)^n$$

$$2. C_n = C_0 + I_n$$

$$3. i = \sqrt[n]{\frac{C_n}{C_0}} - 1$$

$$4. n = \frac{\log C_n - \log C_0}{\log (1+i)}$$

## Tantos Equivalentes

$$5. i = (1+i_k)^k - 1$$

$$6. i_k = (1+i)^{1/k} - 1$$

$$7. J_k = i_k \cdot k$$

$$8. i = \left(1 + \frac{J_k}{k}\right)^k - 1$$

$$9. J_k = \left[(1+i)^{1/k} - 1\right] \cdot k$$

$$10. i_{k'} = (1+i_k)^{k/k'} - 1$$

## Descuento Racional

$$11. C_0 = \frac{C_n}{(1+i)^n}$$

$$12. D_r = C_n \cdot \left[1 - (1+i)^{-n}\right]$$

$$13. D_r = C_n - C_0$$

## Descuento Comercial

$$14. C_0 = C_n \cdot (1-d)^n$$

$$15. D_c = C_n \cdot \left[1 - (1-d)^n\right]$$

$$16. D_c = C_n - C_0$$

## Tanto de Interés y Descuento Equivalentes

$$17. d = \frac{i}{1+i}$$

$$18. i = \frac{d}{1-d}$$

## Equivalencia de Capitales

### Capital Común

Descuento Racional:

$$19. C = \sum_{s=1}^n \frac{C_s}{(1+i)^{ts}} \cdot (1+i)^t$$

Descuento Comercial:

$$20. C = \frac{\sum_{s=1}^n C_s \cdot (1-d)^{ts}}{(1-d)^t}$$

### Vencimiento Común $C \neq C_1 + C_2 + \dots + C_n$

Descuento Racional

$$21. t = \frac{\log C - \log \sum_{s=1}^n C_s \cdot (1+i)^{-ts}}{\log(1+i)}$$

Descuento Comercial

$$22. t = \frac{\log \sum_{s=1}^n C_s \cdot (1-d)^{ts} - \log C}{\log(1-d)}$$

### Vencimiento Medio $C = C_1 + C_2 + \dots + C_n$

Descuento Racional

$$23. t = \frac{\log \sum_{s=1}^n C_s - \log \sum_{s=1}^n C_s \cdot (1+i)^{-ts}}{\log(1+i)}$$

Descuento Comercial

$$24. t = \frac{\log \sum_{s=1}^n C_s \cdot (1-d)^{ts} - \log \sum_{s=1}^n C_s}{\log(1-d)}$$

# FÓRMULAS RENTAS CONSTANTES

## Temporales Pospagables

$$1. a_{\overline{n}|i} = \frac{1 - (1+i)^{-n}}{i}$$

$$2. A_{\overline{n}|i} = c \cdot a_{\overline{n}|i}$$

$$3. s_{\overline{n}|i} = \frac{(1+i)^n - 1}{i}$$

$$4. S_{\overline{n}|i} = c \cdot s_{\overline{n}|i}$$

$$5. \ddot{S}_{\overline{n}|i} = (1+i)^n \cdot c \cdot a_{\overline{n}|i}$$

## Temporales Prepagables

$$6. \ddot{a}_{\overline{n}|i} = a_{\overline{n}|i} \cdot (1+i)$$

$$8. \ddot{s}_{\overline{n}|i} = s_{\overline{n}|i} \cdot (1+i)$$

$$7. \ddot{a}_{\overline{n}|i} = 1 + a_{\overline{n-1}|i}$$

$$9. \ddot{A}_{\overline{n}|i} = c \cdot (1+i) \cdot a_{\overline{n}|i}$$

$$10. \ddot{S}_{\overline{n}|i} = c \cdot \ddot{s}_{\overline{n}|i}$$

## Perpetuas Pospagables

$$11. a_{\infty|i} = \frac{1}{i}$$

$$12. A_{\infty|i} = \frac{c}{i}$$

## Perpetuas Prepagables

$$13. \ddot{a}_{\infty|i} = \frac{1+i}{i}$$

$$14. \ddot{A}_{\infty|i} = c \cdot \frac{1+i}{i}$$

## Diferidas Pospagables Temporales

$$15. d/a_{\overline{n}|i} = \frac{1}{(1+i)^d} \cdot a_{\overline{n}|i}$$

$$16. d/A_{\overline{n}|i} = c \cdot d/a_{\overline{n}|i}$$

## Diferidas Prepagables Temporales

$$17. d/\ddot{a}_{\overline{n}|i} = \frac{1}{(1+i)^{d-1}} \cdot a_{\overline{n}|i}$$

$$18. d/\ddot{A}_{\overline{n}|i} = c \cdot \frac{1}{(1+i)^{d-1}} \cdot a_{\overline{n}|i}$$

## Diferidas Pospagables Perpetuas

$$19. d/a_{\infty|i} = \frac{1}{i} \cdot \frac{1}{(1+i)^d}$$

$$20. d/A_{\infty|i} = \frac{c}{i} \cdot \frac{1}{(1+i)^d}$$

## Diferidas Prepagables Perpetuas

$$21. d/\ddot{a}_{\infty|i} = \frac{1}{i \cdot (1+i)^{d-1}}$$

$$22. d/\ddot{A}_{\infty|i} = \frac{c}{i \cdot (1+i)^{d-1}}$$

## Anticipadas Pospagables Temporales

$$23. h/s_{\overline{n}|i} = (1+i)^h \cdot s_{\overline{n}|i}$$

$$24. h/S_{\overline{n}|i} = c \cdot h/s_{\overline{n}|i}$$

## Anticipadas Prepagables Temporales

$$25. h/\ddot{s}_{\overline{n}|i} = (1+i)^{h+1} \cdot s_{\overline{n}|i}$$

$$26. h/\ddot{S}_{\overline{n}|i} = c \cdot (1+i)^{h+1} \cdot s_{\overline{n}|i}$$



## FÓRMULAS PRÉSTAMOS

### Método Lineal

1.  $A = \frac{C_0}{n}$

2.  $m_k = A \cdot k$

3.  $C_k = C_0 - A \cdot k$

4.  $I_k = C_{k-1} \cdot i$

5.  $a_k = a_1 - (k-1) \cdot A \cdot i$

6.  $a_1 = A + I_1$

### Método Francés

1.  $a = \frac{C_0 \cdot i}{1 - (1+i)^{-n}}$

2.  $A_k = A_1 \cdot (1+i)^{(k-1)}$

3.  $A_1 = a - C_0 \cdot i$

4.  $m_k = A_1 \cdot \frac{(1+i)^k - 1}{i}$

5.  $C_k = C_0 - m_k$

6.  $I_k = C_{k-1} \cdot i$