

|                                                                                 |                                                                                                                                                                                   |      |       |         |       |      |
|---------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-------|---------|-------|------|
| <b>EJERCICIO 1</b>                                                              |                                                                                                                                                                                   |      |       |         |       |      |
|                                                                                 | 0,07                                                                                                                                                                              | 0,14 | 0,002 | 0,1422  | 2     | 1,21 |
| <b>EJERCICIO 2</b>                                                              |                                                                                                                                                                                   |      |       |         |       |      |
|                                                                                 | 7 %                                                                                                                                                                               | 70 % | 10 %  | 14,25 % | 0,7 % |      |
| <b>EJERCICIO 3</b>                                                              |                                                                                                                                                                                   |      |       |         |       |      |
| I = X<br>C <sub>0</sub> = 2.000 €<br>i = 0,08 anual<br>n = 5 años               | I = C <sub>0</sub> x n x i<br>I = 2.000 x 0,08 x 5<br><b>I = 800 €</b>                                                                                                            |      |       |         |       |      |
| <b>EJERCICIO 4</b>                                                              |                                                                                                                                                                                   |      |       |         |       |      |
| C <sub>n</sub> = X<br>C <sub>0</sub> = 6.000 €<br>n = 4 años<br>i = 0,08 anual  | C <sub>n</sub> = C <sub>0</sub> x (1 + n x i)<br>C <sub>n</sub> = 6.000 ( 1 + 4 x 0,08)<br><b>C<sub>n</sub> = 7.920 €</b>                                                         |      |       |         |       |      |
| <b>EJERCICIO 5</b>                                                              |                                                                                                                                                                                   |      |       |         |       |      |
| C <sub>n</sub> = X<br>C <sub>0</sub> = 6.000<br>i = 0,06 anual<br>n = 2 años    | C <sub>n</sub> = C <sub>0</sub> x (1 + n x i)<br>C <sub>n</sub> = 6.000 x ( 1 + 2 x 0,06)<br><b>C<sub>n</sub> = 6.720 €</b>                                                       |      |       |         |       |      |
| <b>EJERCICIO 6</b>                                                              |                                                                                                                                                                                   |      |       |         |       |      |
| I = X<br>C <sub>0</sub> = 20.000 €<br>i = 0,05 anual<br>n = 6 años              | I = C <sub>0</sub> x n x i<br>I = 20.000 x 6 x 0,05<br><b>I = 6.000 €</b>                                                                                                         |      |       |         |       |      |
| <b>EJERCICIO 7</b>                                                              |                                                                                                                                                                                   |      |       |         |       |      |
| C <sub>n</sub> = X<br>C <sub>0</sub> = 4.200 €<br>i = 0,06 anual<br>n = 3 años  | C <sub>n</sub> = C <sub>0</sub> x (1 + n x i)<br>C <sub>n</sub> = 4.200 x (1 + 3 x 0,06)<br><b>C<sub>n</sub> = 4.956 €</b>                                                        |      |       |         |       |      |
| <b>EJERCICIO 8</b>                                                              |                                                                                                                                                                                   |      |       |         |       |      |
| C <sub>0</sub> = X<br>i = 0,05 anual<br>n = 2 años<br>I = 600 €                 | I = C <sub>0</sub> x n x i<br>600 = C <sub>0</sub> x 2 x 0,05<br>600 = C <sub>0</sub> x 0,1<br><b>C<sub>0</sub> = 6.000 €</b>                                                     |      |       |         |       |      |
| <b>EJERCICIO 9</b>                                                              |                                                                                                                                                                                   |      |       |         |       |      |
| C <sub>0</sub> = X<br>i = 0,02 anual<br>n = 4 años<br>C <sub>n</sub> = 1.524 €  | C <sub>n</sub> = C <sub>0</sub> x (1 + n x i)<br>1.524 = C <sub>0</sub> x (1 + 4 x 0,02)<br>1.524 = C <sub>0</sub> x 1,08<br><b>C<sub>0</sub> = 1.411,11 €</b>                    |      |       |         |       |      |
| <b>EJERCICIO 10</b>                                                             |                                                                                                                                                                                   |      |       |         |       |      |
| C <sub>0</sub> = X<br>i = 0,05 anual<br>n = 8 años<br>C <sub>n</sub> = 3.240 €  | C <sub>n</sub> = C <sub>0</sub> x (1 + n x i)<br>3.240 = C <sub>0</sub> x ( 1 + 8 x 0,05)<br>3.240 = C <sub>0</sub> x 1,40<br><b>C<sub>0</sub> = 2.314,29 €</b>                   |      |       |         |       |      |
| <b>EJERCICIO 11</b>                                                             |                                                                                                                                                                                   |      |       |         |       |      |
| C <sub>0</sub> = 3.200 €<br>i = 0,08 anual<br>n = X<br>C <sub>n</sub> = 3.840 € | C <sub>n</sub> = C <sub>0</sub> x (1 + n x i)<br>3.840 = 3.200 x ( 1 + n x 0,08)<br>3.840 = 3.200 + 256 x n<br>640 = 256 x n<br><b>n = 2,5 años</b><br><b>n = 2 años y media.</b> |      |       |         |       |      |
| <b>EJERCICIO 12</b>                                                             |                                                                                                                                                                                   |      |       |         |       |      |
| n = X<br>C <sub>0</sub> = 5.000 €<br>i = 0,09 anual<br>C <sub>n</sub> = 6.800   | C <sub>n</sub> = C <sub>0</sub> x (1 + n x i)<br>6.800 = 5.000 x ( 1 + n x 0,09)<br>6.800 = 5.000 + 450 x n<br>6.800 – 5.000 = 450 x n<br>1.800 = 450 x n<br><b>n = 4 años</b>    |      |       |         |       |      |
| <b>EJERCICIO 13</b>                                                             |                                                                                                                                                                                   |      |       |         |       |      |
| n = X<br>C <sub>0</sub> = 8.000 €<br>I = 4.800 €<br>i = 0,06 anual              | I = C <sub>0</sub> x n x i<br>4.800 = 8.000 x n x 0,06<br>4.800 = 480 x n<br><b>n = 10 años</b>                                                                                   |      |       |         |       |      |
| <b>EJERCICIO 14</b>                                                             |                                                                                                                                                                                   |      |       |         |       |      |
| i = X<br>C <sub>0</sub> = 8.000 €<br>n = 4 años<br>I = 2.560 €                  | I = C <sub>0</sub> x n x i<br>2.560 = 8.000 x 4 x i<br>2.560 = 32.000 x i<br><b>i = 0,08 = 8 %</b>                                                                                |      |       |         |       |      |

|                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|--------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>EJERCICIO 15</b>                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| $i = x$<br>$C_0 = 2.500 \text{ €}$<br>$n = 6 \text{ años}$<br>$C_n = 3.100 \text{ €}$            | $C_n = C_0 \times (1 + n \times i)$<br>$3.100 = 2.500 (1 + 6 \times i)$<br>$3.100 = 2.500 + 15.000 \times i$<br>$600 = 15.000 \times i$<br>$i = 0,04 = 4 \%$                                                                                                                                                                                                                                                                                                                                      |
| <b>EJERCICIO 16</b>                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|                                                                                                  | $i_{12} = 0,06 / 12 = 0,005 = 0,5 \%$<br>$i_2 = 0,08 / 2 = 0,04 = 4 \%$<br>$i_6 = 0,12 / 6 = 0,02 = 2 \%$<br>$i_4 = 0,06 / 4 = 0,015 = 1,5 \%$<br>$i_3 = 0,09 / 3 = 0,03 = 3 \%$                                                                                                                                                                                                                                                                                                                  |
| <b>EJERCICIO 17</b>                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| $I = X$<br>$C_0 = 1.000 \text{ €}$<br>$i = 0,08 \text{ anual}$<br>$n = 3 \text{ trimestres}$     | $i_4 = 0,08 / 4 = 0,02 \text{ trimestral}$<br>$I = C_0 \times n \times i$<br>$I = 1.000 \times 3 \times 0,02$<br>$I = 60 \text{ €}$                                                                                                                                                                                                                                                                                                                                                               |
| <b>EJERCICIO 18</b>                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| $I = X$<br>$C_0 = 30.000 \text{ €}$<br>$i = 0,06 \text{ semestral}$<br>$n = 3 \text{ meses}$     | $i = 0,06 / 6 \text{ meses}$<br>$i_{12} = 0,01 \text{ mensual}$<br>$I = C_0 \times n \times i$<br>$I = 30.000 \times 3 \times 0,01$<br>$I = 900 \text{ €}$                                                                                                                                                                                                                                                                                                                                        |
| <b>EJERCICIO 19</b>                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| $i = X \text{ anual}$<br>$C_0 = 6.000 \text{ €}$<br>$I = 300 \text{ €}$<br>$n = 5 \text{ meses}$ | $I = C_0 \times n \times i$<br>$300 = 6.000 \times 5 \times i_{12}$<br>$300 = 30.000 \times i_{12}$<br>$i_{12} = 0,01$<br>$i = 0,01 \times 12$<br>$i = 0,12 \text{ anual}$                                                                                                                                                                                                                                                                                                                        |
| <b>EJERCICIO 20</b>                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| $n = X$<br>$C_0 = 2.500$<br>$i = 0,08 \text{ anual}$<br>$I = 250 \text{ €}$                      | $I = C_0 \times n \times i$<br>$250 = 2.500 \times n \times 0,08$<br>$250 = 200 \times n$<br>$n = 1,25 \text{ años}$<br><br>$1 \text{ año} \text{ ---- } 12 \text{ meses}$<br>$0,25 \text{ año} \text{ ---- } X \text{ meses}$<br>$X = 3 \text{ meses}$<br><br>$n = 1 \text{ años y } 3 \text{ meses}$                                                                                                                                                                                            |
| <b>EJERCICIO 21</b>                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| $I = X$<br>$i = 0,10 \text{ anual}$<br>$n = 6 \text{ meses}$<br>$C_n = 5.250 \text{ €}$          | $i_{12} = 0,10/12$<br>$C_n = C_0 \times (1 + n \times i)$<br>$5.250 = C_0 \times (1 + 6 \times 0,10 / 12)$<br>$5.250 = C_0 \times 1,05$<br>$C_0 = 5.000 \text{ €}$<br>$I = C_n - C_0$<br>$I = 5.250 - 5.000$<br>$I = 250 \text{ €}$                                                                                                                                                                                                                                                               |
| <b>EJERCICIO 22</b>                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| $C_0 = x$<br>$I = 900 \text{ €}$<br>$n = 180 \text{ días}$<br>$i = 0,06 \text{ anual}$           | $i_{360} = 0,06 / 360$<br>$I = C_0 \times n \times i$<br>$900 = C_0 \times 180 \times 0,06 / 360$<br>$900 = C_0 \times 90$<br>$C_0 = 30.000 \text{ €}$                                                                                                                                                                                                                                                                                                                                            |
| <b>EJERCICIO 23</b>                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| $n = X$<br>$C_n = C_0 + 28/100 C_0$<br>$C_n = 1,28 C_0$<br>$i = 0,10 \text{ anual}$              | $C_n = C_0 \times (1 + n \times i)$<br>$1,28 C_0 = C_0 (1 + n \times 0,10)$<br>$1,28 = 1 + n \times 0,10$<br>$0,28 = n \times 0,10$<br>$n = 2,8 \text{ años}$<br><br>$1 \text{ año} \text{ ---- } 12 \text{ meses}$<br>$0,80 \text{ año} \text{ ---- } X \text{ meses}$<br>$X = 9,60 \text{ meses}$<br>$1 \text{ mes} \text{ ---- } 30 \text{ días}$<br>$0,60 \text{ mes} \text{ ---- } X \text{ días}$<br>$X = 18 \text{ días}$<br><br>$n = 2 \text{ años, } 9 \text{ meses y } 18 \text{ días}$ |

|                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|----------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>EJERCICIO 24</b>                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| $C_n = 9 \times C_0$<br>$i_2 = 0,05$ semestral                                                                                                           | $C_n = C_0 \times (1 + n \times i)$<br>$9 \times C_0 = C_0 (1 + n \times 0,05)$<br>$9 = 1 + n \times 0,05$<br>$8 = n \times 0,05$<br><b><math>n = 160</math> semestres</b>                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>EJERCICIO 25</b>                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| $I = X$<br>$C_0 = 2.000 \text{ €}$<br>$n = 180$ días<br>$i = 0,12$ anual                                                                                 | $i_{360} = 0,12 / 360$<br>$I = C_0 \times n \times i$<br>$I = 2.000 \times 180 \times 0,12 / 360$<br><b><math>I = 120 \text{ €}</math></b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>EJERCICIO 26</b>                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| $C_n = X$<br>$C_0 = 3.650 \text{ €}$<br>$i = 0,12$ anual<br>$n = 12$ meses                                                                               | $i_{12} = 0,12 / 12$<br>$C_n = C_0 \times (1 + n \times i)$<br>$C_n = 3.650 (1 + 12 \times 0,12 / 12)$<br><b><math>C_n = 4.088 \text{ €}</math></b>                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>EJERCICIO 27</b>                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| $n = 4$ años<br>$n = 8$ semestres<br>$i_2 = 0,06$ semestral<br><br>$n = 10$ años<br>$i = 0,08$<br><br>$I_1 = I_2$<br>$C_{01} + C_{02} = 1.600 \text{ €}$ | $C_{02} = 1.600 - C_{01}$<br>$I_1 = C_{01} \times 8 \times 0,06$<br><b><math>I_1 = 0,48 \times C_{01}</math></b><br><br>$I_2 = C_{02} \times n \times i$<br>$I_2 = (1.600 - C_{01}) \times 10 \times 0,08$<br><b><math>I_2 = 1.280 - 0,80 C_{01}</math></b><br><br>$I_1 = I_2$<br>$0,48 \times C_{01} = 1.280 - 0,80 C_{01}$<br>$0,48 C_{01} + 0,80 C_{01} = 1.280$<br>$1,28 C_{01} = 1.280$<br><b><math>C_{01} = 1.000 \text{ €}</math></b><br><b><math>C_{02} = 600 \text{ €}</math></b>                                                                                                                 |
| <b>EJERCICIO 28</b>                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| $n = x$<br>$C_n = 3 C_0$<br>$i = 0,16$ anual                                                                                                             | $C_n = C_0 \times (1 + n \times i)$<br>$3 C_0 = C_0 \times (1 + n \times 0,16)$<br>$3 - 1 = 0,16 n$<br>$n = 2 / 0,16$<br><b><math>n = 12,5</math> años</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>EJERCICIO 29</b>                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| $I_{\text{com}} - I_{\text{civil}} = 16,44$<br>$C_0 = 60.000 \text{ €}$<br>$i = 0,04$ anual<br>$n = x$                                                   | $(C_0 \times n \times i) / 360 - (C_0 \times n \times i) / 365 = 16,44$<br>$(60.000 \times n \times 0,04) / 360 - (60.000 \times n \times 0,04) / 365 = 16,44$<br>$6,66666667 \times n - 6,575342 \times n = 116,44$<br>$0,091324204 \times n = 144$<br><b><math>n = 180</math> días</b>                                                                                                                                                                                                                                                                                                                   |
| <b>EJERCICIO 30</b>                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| $C_n = 3.848$<br>$i = 0,08$ anual<br><br>$C_n = 4.160$<br>$i = 0,10$ anual<br><br>$n = x$<br>$C_0 = x$                                                   | $C_n = C_0 \times (1 + n \times i)$<br>$3.848 = C_0 \times (1 + n \times 0,08)$<br>$C_0 = 3.848 / (1 + n \times 0,08)$<br><br>$C_n = C_0 \times (1 + n \times i)$<br>$4.160 = C_0 \times (1 + n \times 0,10)$<br>$C_0 = 4.160 / (1 + n \times 0,10)$<br><br>$3.848 / (1 + n \times 0,08) = 4.160 / (1 + n \times 0,10)$<br>$3.848 (1 + n \times 0,10) = 4.160 (1 + n \times 0,08)$<br>$3.848 + 384,8 n = 4.160 + 332,8 n$<br>$3.848 - 4.160 = 332,80 n - 384,80 n$<br>$312 = 52 n$<br><b><math>n = 6</math> años</b><br><br>$C_0 = 3.848 / 1 + 6 \times 0,08$<br><b><math>C_0 = 2.600 \text{ €}</math></b> |

**EJERCICIO 31**

$C_0 = 2.300$   
 $i = 0,08$  anual  
 $n_1 = n_2/2$

$C_0 = 3.400$   
 $i = 0,08$  anual  
 $n_2$

$I_1 + I_2 = 2.184$

$$I_1 = 2.300 \times n_2 / 2 \times 0,08$$

$$I_1 = 92 \times n_2$$

$$I_2 = 3.400 \times n_2 \times 0,08$$

$$I_2 = 272 \times n_2$$

$$I_1 + I_2 = 2.184$$

$$92 \times n_2 + 272 \times n_2 = 2.184$$

$$364 \times n_2 = 2.184$$

$$n_2 = 6 \text{ años}$$

**EJERCICIO 32**

$C_0/2$   
 $n = 6$  años  
 $i = 0,02$  anual  
 $C_0/2$   
 $N = 6$  años  
 $i = 0,05$  anual

$C_0$   
 $n = 6$  años  
 $i = 0,07$  anual

$$C_n = C_0 / 2 (1 + 6 \times 0,02) + C_0 / 2 (1 + 6 \times 0,05)$$

$$C_n = C_0 \times 0,56 + C_0 \times 0,65$$

$$C_n = 1,21 C_0$$

$$C_n = C_0 (1 + 6 \times 0,07)$$

$$C_n = 1,42 C_0$$

**EJERCICIO 33**

$i = X$   
 $C_0 = 9.000$   
 $n = 90$  días  
 $I_{com} - I_{civ} = 2,465753$

$$I_{com} = 9.000 \times 90 \times i / 360$$

$$I_{com} = 2.250 \times i$$

$$I_{civ} = 9.000 \times 90 \times i / 365$$

$$I_{civ} = 2.219,18 \times i$$

$$I_{com} - I_{civ} = 2,465753$$

$$2.250 \times i - 2.219,18 \times i = 2,465753$$

$$30,82 \times i = 2,465753$$

$$i = 0,08 = 8 \%$$

**EJERCICIO 34**

$C_0 = x$   
 $n = 150$  días  
 $i = 0,07$   
 $I_{com} - I_{civ} = 3 \text{ €}$

$$I_{com} = C_0 \times 150 \times 0,07 / 360$$

$$I_{com} = 0,029167 \times C_0$$

$$I_{civ} = C_0 \times 150 \times i / 365$$

$$I_{civ} = 0,028767 \times C_0$$

$$I_{com} - I_{civ} = 3$$

$$0,029167 \times C_0 - 0,028767 \times C_0 = 3$$

$$0,0004 \times C_0 = 3$$

$$C_0 = 7.500 \text{ €}$$

**EJERCICIO 35**

| $C_0$           | $n$      | Nos comerciales |
|-----------------|----------|-----------------|
| 180,10          | 3 meses  | 540,30          |
| 90,20           | 12 meses | 1.082,40        |
| 300,65          | 6 meses  | 1.803,90        |
| Suma Nos comer. |          | 3.426,60        |

$$\text{DIVISOR FIJO} = 12 / 0,08 = 150$$

$$\text{INTERESES} = 3.426,60 / 150 = 22,84 \text{ €}$$

**EJERCICIO 36**

| $C_0$           | $n$ | Nos comerciales |
|-----------------|-----|-----------------|
| 3.000           | 120 | 360.000         |
| 3.000           | 180 | 540.000         |
| 3.000           | 200 | 600.000         |
| Suma Nos comer. |     | 1.500.000       |

$$\text{DIVISOR FIJO} = 360 / 0,08 = 4.500$$

$$\text{INTERESES} = 1.500.000 / 4.500 = 333,33 \text{ €}$$

**EJERCICIO 37**

| $C_0$                  | n        | Nos comerciales |
|------------------------|----------|-----------------|
| 400                    | 2 meses  | 800             |
| 600                    | 6 meses  | 3.600           |
| 800                    | 9 meses  | 7.200           |
| 1.000                  | 12 meses | 12.000          |
| <b>Suma Nos comer.</b> |          | <b>23.600</b>   |

$$\text{DIVISOR FIJO} = 12 / 0,06 = 200$$

$$\text{INTERESES} = 23.600 / 200 = 118 \text{ €}$$

**EJERCICIO 38**

| $C_0$                  | n | Nos comerciales            |
|------------------------|---|----------------------------|
| $C_0$                  | 3 | $3 C_0$                    |
| $2 C_0$                | 6 | $12 C_0$                   |
| $4 C_0$                | 9 | $36 C_0$                   |
| <b>Suma Nos comer.</b> |   | <b><math>51 C_0</math></b> |

$$\text{DIVISOR FIJO} = 12 / 0,04 = 300$$

$$85 = 51 C_0 / 300$$

$$25500 = 51 C_0$$

$$C_0 = 500 \text{ €}$$

**EJERCICIO 39**

30 Julio – 10 Diciem.  
 $n_1 = 133$  días  
 30 Agos. – 10 Diciem.  
 $n_2 = 102$  días  
 30 Sept. – 10 Diciem.  
 $n_3 = 71$  días

| $C_0$        | n                      | Nos comerciales |
|--------------|------------------------|-----------------|
| 600          | 133                    | 79.800          |
| 620          | 102                    | 63.240          |
| 680          | 71                     | 48.280          |
| <b>1.900</b> | <b>Suma Nos comer.</b> | <b>191.320</b>  |

$$\text{DIVISOR FIJO} = 365 / 0,01 = 3.650$$

$$\text{INTERESES} = 191.320 / 3.650$$

$$\text{INTERESES} = 52,42$$

$$\text{CAPITAL FINAL} = 1.900 + 52,42 = 1.952,42 \text{ €}$$

**EJERCICIO 40**

$$I_{\text{com}} = 12,50 \text{ €}$$

$$I_{\text{civ}} = X$$

$$I_{\text{com}} = 73 / 72 \times I_{\text{civ}}$$

$$12,50 = 73 / 72 \times I_{\text{civ}}$$

$$I_{\text{civ}} = 12,33 \text{ €}$$

**EJERCICIO 41**

$$I_{\text{civ}} = 6,20 \text{ €}$$

$$I_{\text{com}} = X$$

$$I_{\text{com}} = 73 / 72 \times I_{\text{civ}}$$

$$I_{\text{com}} = 73 / 72 \times 6,20$$

$$I_{\text{com}} = 6,29 \text{ €}$$

**EJERCICIO 42**

$$C_n = X$$

$$C_0 = 7.000$$

$$i = 0,06 \text{ anual}$$

$$n = 2 \text{ años}$$

$$C_n = C_0 \times (1 + n \times i)$$

$$C_n = 7.000 \times (1 + 2 \times 0,06)$$

$$C_n = 7.840 \text{ €}$$

**EJERCICIO 43**

$$C_n = 1.750 \text{ €}$$

$$n = 6 \text{ meses}$$

$$i = 0,12 \text{ anual}$$

$$1.750 = C_0 \times (1 + 6 \times 0,12 / 12)$$

$$1.750 = 1,06 C_0$$

$$C_0 = 1.650,94 \text{ €}$$

**EJERCICIO 44**

$$I = 1.750 - 1.650,94 = 99,06 \text{ €}$$

**EJERCICIO 45**

$$n = 10 \text{ meses}$$

$$i = 1/5 C_0$$

$$1/5 C_0 = C_0 \times 10 \times i / 12$$

$$0,2 = 0,83333 i$$

$$I = 0,24 = 24\%$$

**EJERCICIO 46**

$$i = 0,08 \text{ anual}$$

$$C_n = 5.920$$

$$n = 6 \text{ meses}$$

$$5.920 = C_0 \times (1 + 6 \times 0,08)$$

$$5.920 = C_0 \times 1,48$$

$$C_0 = 4.000 \text{ €}$$

|                                                                                                                      |                                                                                                                                                                                                       |
|----------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>EJERCICIO 47</b>                                                                                                  |                                                                                                                                                                                                       |
| $i = 0,04$ anual<br>$n = 2$ años<br>$C_0 = C_{n1}$<br>$i = 0,005$ mensual<br>$I = 64,80$ €<br>$n = 1$ año = 12 meses | $C_n = C_0 \times (1 + 2 \times 0,04)$<br>$C_n = 1,08 C_0$<br>$I = 1,08 \times C_0 \times 12 \times 0,005$<br>$64,8 = 0,0648 \times C_0$<br>$C_0 = 1.000$ €                                           |
| <b>EJERCICIO 48</b>                                                                                                  |                                                                                                                                                                                                       |
| $C_0 = 1.000$<br>$C_n = 1.480$<br>$n = 8$ años<br>$i = X$                                                            | $1.480 = 1.000 (1 + 8 i)$<br>$1.480 = 1.000 + 8.000 i$<br>$480 = 8.000 i$<br>$i = 0,06 = 6 \%$                                                                                                        |
| <b>EJERCICIO 49</b>                                                                                                  |                                                                                                                                                                                                       |
| $C_0 = 500$ €<br>$i = 0,04$<br>$C_0 = 500$ €<br>$i = 0,10$<br>$2 C_{n1} = C_{n2}$                                    | $C_{n1} = 500 (1 + 0,04 n)$<br>$C_{n1} = 500 + 20 n$<br>$C_{n2} = 500 (1 + 0,10 n)$<br>$C_{n2} = 500 + 50 n$<br>$2 C_{n1} = C_{n2}$<br>$2 (500 + 20 n) = 500 + 50 n$<br>$500 = 10 n$<br>$n = 50$ años |
| <b>EJERCICIO 50</b>                                                                                                  |                                                                                                                                                                                                       |
| $i = X$<br>$C_n = 2 C_0$<br>$n = 8$ años                                                                             | $2C_0 = C_0 \times (1 + 8 \times i)$<br>$2 = 1 + 8 i$<br>$1 = 8 i$<br>$I = 0,125 = 12,5 \%$                                                                                                           |
| <b>EJERCICIO 51</b>                                                                                                  |                                                                                                                                                                                                       |
| $n = 3$ meses<br>$i = 0,12$ anual<br>$I = 300$ €                                                                     | $300 = C_0 \times 3 \times 0,12 / 12$<br>$300 = 0,03 C_0$<br>$C_0 = 10.000$ €                                                                                                                         |
| <b>EJERCICIO 52</b>                                                                                                  |                                                                                                                                                                                                       |
| $C_0 = 7.000$<br>$I = 1.820$<br>$i = 0,08$<br>$n = X$                                                                | $1.820 = 7.000 \times n \times 0,08$<br>$1.820 = 560 n$<br>$n = 3,25$ años<br>$n = 3$ años y 3 meses                                                                                                  |
| <b>EJERCICIO 53</b>                                                                                                  |                                                                                                                                                                                                       |
| $C_n = 3 C_0$<br>$i = 0,1$ anual<br>$n = X$                                                                          | $3 C_0 = C_0 \times (1 + 0,10 \times n)$<br>$2 = 0,1 n$<br>$n = 20$ años                                                                                                                              |
| <b>EJERCICIO 54</b>                                                                                                  |                                                                                                                                                                                                       |
| $C_n = 2.240$<br>$C_0 = 2.000$<br>$i = 0,10$ anual                                                                   | $2.240 = 2.000 (1 + 0,10 n)$<br>$2.240 = 2.000 + 200 n$<br>$240 = 200 n$<br>$n = 1,2$ años                                                                                                            |
| <b>EJERCICIO 55</b>                                                                                                  |                                                                                                                                                                                                       |
| $C_0 = 4.000$<br>$n = 8$ meses<br>$i = 0,08$ anual                                                                   | $C_n = 4.000 \times (1 + 8 \times 0,08 / 12)$<br>$C_n = 4.213,33$                                                                                                                                     |
| <b>EJERCICIO 56</b>                                                                                                  |                                                                                                                                                                                                       |
| $n = 6$ semanas y 8 días<br>$n = 50$ días<br>$C_0 = 4.600$<br>$i = 0,08$ anual<br>Año civil                          | $C_n = C_0 (1 + n \times i)$<br>$C_n = 4.600 (1 + 50 \times 0,08 / 365)$<br>$C_n = 4.650,41$ €                                                                                                        |
| <b>EJERCICIO 57</b>                                                                                                  |                                                                                                                                                                                                       |
| $i = 0,03$ trimestral<br>$C_n = 9.374$ €<br>$n = 9$ meses                                                            | $i = 0,01$ mensual<br>$C_n = C_0 (1 + n \times i)$<br>$9.374 = C_0 (1 + 9 \times 0,01)$<br>$9.374 = C_0 \times 1,09$<br>$C_0 = 8.600$ €                                                               |

|                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                              |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>EJERCICIO 58</b>                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                              |
| $C_0 = 1.000$<br>$n = 8\text{-ene. al } 28\text{-jun.} = 171 \text{ días}$<br>$i = 0,0425 \text{ anual}$<br>$C_0 = 1.000 \text{ €}$<br>$n = 22\text{-ene al } 28\text{-jun.}$<br>$n = 157 \text{ días}$<br>$i = 0,045 \text{ anual}$ | $I = C_0 \times n \times i$<br>$I_1 = 1.000 \times 171 \times 0,0425 / 365$<br>$I_1 = 19,91 \text{ €}$<br>$I_2 = 1.000 \times 157 \times 0,045 / 365$<br>$I_2 = 19,36$<br>$I = 19,91 + 19,36$<br>$I = 39,27 \text{ €}$                                                                                                                       |
| <b>EJERCICIO 59</b>                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                              |
| $C_0 = x$<br>$C_n = 8.000 \text{ €}$<br>$I_a = 0,03 \text{ anual}$<br>$n = 2 \text{ meses}$                                                                                                                                          | $C_0 = C_n (1 - n \times i)$<br>$C_0 = 8.000 (1 - 0,03 / 12 \times 2)$<br>$C_0 = 7.960 \text{ €}$                                                                                                                                                                                                                                            |
| <b>EJERCICIO 60</b>                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                              |
| $n = 9 \text{ meses}$<br>$i_a = 0,08$                                                                                                                                                                                                | $C_0 (1 + 9 \times i_v / 12) = C_0 / (1 - 9 \times 0,08 / 12)$<br>$1 + 0,75 i_v = 1 / 0,94$<br>$(1 + 0,75 i_v) \times 0,94 = 1$<br>$0,94 + 0,705 i_v = 1$<br>$0,705 i_v = 1 - 0,94$<br>$0,705 i_v = 0,06$<br>$i_v = 0,0851 = 8,51 \%$                                                                                                        |
| <b>EJERCICIO 61</b>                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                              |
| $C_0 = 1.500$<br>$n = 9 \text{ meses}$<br>$I_a = 0,08$<br>$C_0 = 1.500$<br>$n = 9 \text{ meses}$<br>$i_v = 0,0851$                                                                                                                   | $1.500 = C_n (1 - 9 \times 0,08 / 12)$<br>$1.500 = C_n \times 0,94$<br>$C_n = 1.595,74 \text{ €}$<br><br>$C_n = 1.500 (1 + 9 \times 0,0851 / 12)$<br>$C_n = 1.595,71 \text{ €}$                                                                                                                                                              |
| <b>EJERCICIO 62</b>                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                              |
| $C_0 = 1.500$<br>$n = 18 \text{ meses}$<br>$I_a = 0,08$<br>$C_0 = 1.500$<br>$n = 9 \text{ meses}$<br>$i_v = 0,0851$                                                                                                                  | $1.500 = C_n (1 - 18 \times 0,08 / 12)$<br>$1.500 = C_n \times 0,88$<br>$C_n = 1.704,55 \text{ €}$<br><br>$C_n = 1.500 (1 + 18 \times 0,0851 / 12)$<br>$C_n = 1.691,48 \text{ €}$                                                                                                                                                            |
| <b>EJERCICIO 63</b>                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                              |
| $i_1 = x$<br>$n = 3 \text{ años}$<br>$I_2 - I_1 = 0,54 \text{ €}$<br>$i_2 = i_1 + 0,01$<br>$C_1 = 20 / 3 \times I_1$                                                                                                                 | $I_1 = 20 / 3 \times I_1 \times 3 \times i_1$<br>$1 = 20 \times i_1$<br>$i_1 = 0,05$<br>$I_1 = C_0 \times 0,05 \times 3$<br>$I_1 = C \times 0,15$<br>$I_2 = C_0 \times 0,06 \times 3$<br>$I_2 = C \times 0,18$<br>$I_2 - I_1 = 0,54$<br>$C_0 \times 0,18 - C_0 \times 0,15 = 0,54$<br>$C_0 \times 0,03 = 0,54$<br>$C_0 = 18 \text{ €}$       |
| <b>EJERCICIO 64</b>                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                              |
| $C_0 = x$<br>$i_4 = 0,05 \text{ trimestral}$<br>$n = 3 \text{ años}$<br>$n = 22 \text{ meses}$<br>$i_2 = 0,03 \text{ bimestral}$<br>$C_{n2} = 639,48$                                                                                | $i = 0,05 \text{ trimestral} = 0,20 \text{ anual}$<br>$C_{n1} = C_0 \times (1 + 3 \times 0,20)$<br>$C_{n1} = C_0 \times 1,60$<br><br>$n_2 = 22 \text{ meses} = 11 \text{ bimestres}$<br>$C_{n2} = C_0 \times 1,60 (1 + 11 \times 0,03)$<br>$639,48 = C_0 \times 1,60 \times 1,33$<br>$639,48 = C_0 \times 2,128$<br>$C_0 = 300,51 \text{ €}$ |
| <b>EJERCICIO 65</b>                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                              |
| $C_0 = 120,20$<br>$i = 0,03 \text{ trimestral}$<br>$C_0 = 120,20$<br>$I = 0,01 \text{ cuatrimestral}$<br>$C_{n1} = C_{n2} \times 2$                                                                                                  | $i = 0,03 \text{ trimestral} = 0,12 \text{ anual}$<br>$C_{n1} = 120,20 (1 + n \times 0,12)$<br><br>$i_3 = 0,01 \text{ cuatrimestral} = 0,03 \text{ anual}$<br>$C_{n2} = 120,20 (1 + n \times 0,03)$<br><br>$C_{n1} = C_{n2} \times 2$<br>$120,20 (1 + n \times 0,12) = 2 \times 120,20 (1 + n \times 0,03)$                                  |

|                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                                                 | $1 + n \times 0,12 = 2 \times (1 + n \times 0,03)$ $1 + n \times 0,12 = 2 \times 0,06 \times n$ $1 = 0,06 \times n$ $n = 16,66666 \text{ años}$<br>$1 \text{ año} \text{ ---- } 12 \text{ meses}$ $0,666666 \text{ ---- } X \text{ meses}$ $X = 8 \text{ meses}$ $n = 16 \text{ años y } 8 \text{ meses}$                                                                                                                                                                                   |
| <b>EJERCICIO 66</b>                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| $C_0 = 480,81 \text{ €}$<br>$i = 0,04 \text{ bimestral} = 0,24 \text{ anua}$<br>$C_0 = 480,81 \text{ €}$<br>$i = 0,02 \text{ cuatrimestral} = 0,06 \text{ anual}$<br>$C_{n1} = 3 \times C_{n2}$ | $C_{n1} = 480,81 (1 + n \times 0,12)$<br>$C_{n2} = 480,81 (1 + n \times 0,03)$<br>$C_{n1} = 3 \times C_{n2}$ $480,81 (1 + n \times 0,12) = 480,81 \times (1 + n \times 0,03) \times 3$ $1 + n \times 0,12 = 3 + n \times 0,09$ $n \times 0,03 = 2$ $n = 66,6666 \text{ semestres}$                                                                                                                                                                                                          |
| <b>EJERCICIO 67</b>                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| $C_0 = 180,30$<br>$i_6 = 0,03 \text{ bimestral}$<br>$C_0 = 180,30$<br>$i_2 = 0,02 \text{ semestral}$<br>$C_{n1} = 2 \times C_{n2}$                                                              | $C_{n1} = 180,30 (1 + n \times 0,18)$<br>$C_{n2} = 180,30 (1 + n \times 0,04)$<br>$C_{n1} = 2 \times C_{n2}$ $180,30 (1 + n \times 0,18) = 2 \times 180,30 (1 + n \times 0,04)$ $1 + n \times 0,18 = 2 + n \times 0,08$ $1 = 0,10 \times n$ $n = 10 \text{ años}$                                                                                                                                                                                                                           |
| <b>EJERCICIO 68</b>                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| $n = x \text{ cuatrimestres}$<br>$i_6 = 0,02 \text{ bimestral}$<br>$C_n = 6/5 C_0$                                                                                                              | $6/5 C_0 = C_0 (1 + n \times 0,04)$ $6/5 = 1 + n \times 0,04$ $6 = 5 (1 + n \times 0,04)$ $6 = 5 + 0,2 \times n$ $1 = 0,2 \times n$ $n = 5 \text{ cuatrimestres}$                                                                                                                                                                                                                                                                                                                           |
| <b>EJERCICIO 69</b>                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| $i_3 = 0,04 \text{ cuatrimestral}$<br>$n_1$<br>$n_2 = n_1 + 1 \text{ semestres}$<br>$I = 36,06 \text{ €}$                                                                                       | $i_2 = 0,06 \text{ semestral}$<br>$36,06 = C_0 \times 1 \times 0,06$<br>$C_0 = 601 \text{ €}$                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>EJERCICIO 70</b>                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| $C_{01}$<br>$i_1 = 0,06$<br>$n_1 = 3 \text{ años}$<br>$C_{02} = C_{01} \times 1,50$<br>$i_2 = 0,07$<br>$n_2 = 2 \text{ años}$<br>$I_1 + 3,61 = I_2$                                             | $I_1 = C_{01} \times 0,06 \times 3$ $I_1 = C_{01} \times 0,18$ $I_2 = C_{01} \times 1,50 \times 0,07 \times 2$ $I_2 = C_{01} \times 0,21$ $I_1 + 3,61 = I_2$ $C_{01} \times 0,18 + 3,61 = C_{01} \times 0,21$ $3,61 = C_{01} \times 0,21 - C_{01} \times 0,18$ $3,61 = 0,03 \times C_{01}$ $C_{01} = 120,33 \text{ €}$ $C_{02} = 120,33 \times 1,50 =$ $C_{02} = 180,50 \text{ €}$ $I_1 = 120,33 \times 0,06 \times 3$ $I_1 = 21,66 \text{ €}$ $I_2 = 21,66 + 3,61$ $I_2 = 25,27 \text{ €}$ |
| <b>EJERCICIO 71</b>                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| $n = 30 \text{ días}$<br>$i = 0,09 \text{ anual}$<br>$I_{360} - I_{365} = 9,02$                                                                                                                 | $I_{360} = C_0 \times 300 \times 0,09 / 360$ $I_{360} = 0,075 \times C_0$ $I_{365} = C_0 \times 300 \times 0,09 \times 365$ $I_{365} = 0,073972602 \times C_0$ $I_{360} - I_{365} = 9,02$ $0,075 \times C_0 - 0,073972602 \times C_0 = 9,02$ $0,001027398 \times C_0 = 9,02$ $C_0 = 8.779,46 \text{ €}$                                                                                                                                                                                     |
| <b>EJERCICIO 72</b>                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| $i = \% \text{ cuatrimestral}$<br>$n = 1 \text{ año y } 7 \text{ meses}$<br>$i = 1/5 C_0$                                                                                                       | $1/5 C_0 = C_0 \times 19 \times i_{12}$ $1/5 C_0 = C_0 \times 19 \times i_{12}$ $1 = 5 \times 19 \times i_{12}$                                                                                                                                                                                                                                                                                                                                                                             |

|                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                                                                              | $1 = 95 \times i_{12}$ $i_{12} = 0,010526315$ $i_4 = 4 \times 0,010526315$ $i_4 = 0,04210526 = 4,21 \% \text{ cuatrimestral}$                                                                                                                                                                                                                                                                                                                                                                    |
| <b>EJERCICIO 73</b>                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| $C_0 = 18.665,42 \text{ €}$<br>$C_{01} = X$<br>$n = 9 \text{ meses}$<br>$i = 0,12 \text{ anual}$<br>$C_{02} = C_{01} + 6010,12$<br>$n = 16 \text{ meses}$<br>$i_6 = 0,03 \text{ bimestral}$<br>$C_{n1} + C_{n2} = 18.655,42$ | $C_{n1} = C_{01} (1 + 9 \times 0,12 / 12)$ $C_{n1} = C_{01} \times 1,09$ $C_{n2} = (C_{01} + 6.010,12) (1 + 16 \times 0,015)$ $C_{n2} = (C_{01} + 6010,12) \times 1,24$ $C_{n2} = 1,24 \times C_{01} + 7.452,5488$ $C_{n1} + C_{n2} = 18.665,42$ $C_{01} \times 1,09 + 1,24 \times C_{01} + 7.452,5488 = 18.665,42$ $2,33 \times C_{01} = 18.655,42 - 7.452,5488$ $2,33 \times C_{01} = 11.202,8712$ $C_{01} = 4.808,10 \text{ €}$ $C_{02} = 4.808,10 + 6.010,12$ $C_{02} = 10.818,22 \text{ €}$ |

**EJERCICIO 74**

$i = 8\%$  semestral  
 $n = 1$  año y 6 meses  
 $C_n = 3.353,65$  €

$$3.353,65 = C_0 (1 + 0,08 \times 3)$$

$$3.353,65 = C_0 \times (1,24)$$

$$C_0 = 2.704,56 \text{ €}$$

**EJERCICIO 75**

$C_0 = 5.000$  €  
 $i = 0,04$  anual  
 $i = 0,10$  anual  
 $C_{n1} \times 2 = C_{n2}$

$$C_{n1} = 5.000 (1 + n \times 0,04)$$

$$C_{n2} = 5000 (1 + n \times 0,10)$$

$$C_{n1} \times 2 = C_{n2}$$

$$5.000 (1 + n \times 0,04) \times 2 = 5.000 (1 + n \times 0,10)$$

$$2 + n \times 0,08 = 1 + n \times 0,10$$

$$1 = 0,02 n$$

$$n = 50 \text{ años}$$

**EJERCICIO 76**

| Co     | N       | Nos comerciales |
|--------|---------|-----------------|
| 5.000  | 1 mes   | 5.000           |
| 25.000 | 5 meses | 125.000         |
| 30.000 | 9 meses | 270.000         |
| 20.000 | 6 meses | 120.000         |
|        |         | 520.000         |

$$\text{Divisor fijo} = 12 / 0,08 = 150$$

$$\text{Intereses} = 520.000 / 150 = 3.466,67$$

**EJERCICIO 77****1º inversion**

$C_{01} = X$   
 $n = 1$  año  
 $i = 0,06$  anual  
 $i = 0,08$  anual  
 $I = 693,60$

**2º inversion**

$C_{02} = X$   
 $n = 1$  año  
 $i = 0,08$  anual  
 $i = 0,06$  anual  
 $I = 693,60 + 44,40$   
 $I = 738$

$$693,60 = C_{01} \times 1 \times 0,06 + C_{02} \times 1 \times 0,08$$

$$693,60 = C_{01} \times 0,06 + C_{02} \times 0,08$$

$$738 = C_{01} \times 1 \times 0,08 + C_{02} \times 1 \times 0,06$$

$$738 = C_{01} \times 0,08 + C_{02} \times 0,06$$

$$693,60 - C_{02} \times 0,08 = C_{01} \times 0,06$$

$$\frac{693,60 - C_{02} \times 0,08}{0,06} = C_{01}$$

$$738 = \frac{693,60 - C_{02} \times 0,08}{0,06} \times 0,08 + C_{02} \times 0,06$$

$$738 = 924,80 - 0,106666666 C_{02} + C_{02} \times 0,06$$

$$738 - 924,80 = -0,106666666 C_{02} + C_{02} \times 0,06$$

$$-186,80 = -0,046666664 \times C_{02}$$

$$C_{02} = 4.002,86 \text{ €}$$

$$C_{01} = \frac{693,60 - 4.002,86 \times 0,08}{0,06}$$

$$C_{01} = 6.222,85 \text{ €}$$

**EJERCICIO 78**

$i_1 = 0,06$  anual  
 $i_2 = 0,08$  anual  
 $n = 1$  año  
 $I = 2.560$  €  
 $i_1 = 0,08$  anual  
 $i_2 = 0,06$  anual  
 $I = 3.040$  €

$$2.560 = C_{01} \times 1 \times 0,06 + C_{02} \times 1 \times 0,08$$

$$3.040 = C_{01} \times 1 \times 0,08 + C_{02} \times 1 \times 0,06$$

$$\frac{2.560 - C_{02} \times 0,08}{0,06} = C_{01}$$

$$3.040 = \frac{2.560 - C_{02} \times 0,08}{0,06} \times 0,08 + C_{02} \times 0,06$$

$$3.040 = 3.413,33 - 0,106666666 \times C_{02} + C_{02} \times 0,06$$

$$3.040 - 3.413,33 = -0,106666666 \times C_{02} + C_{02} \times 0,06$$

$$373,33 = 0,046666666 C_{02}$$

$$C_{02} = 8.000 \text{ €}$$

$$\frac{2.560 - 8000 \times 0,08}{0,06} = C_{01}$$

$$32.000 = C_{01}$$

|                                                                                                                                    |                                                                                                                                                                                                                                                                                                          |
|------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>EJERCICIO 79</b>                                                                                                                |                                                                                                                                                                                                                                                                                                          |
| $i_4 = 0,015$ % trimestral<br>$n = 8$ meses<br>$i_6 = 0,0125$ bimestral<br>$n = 1$ año y medio<br>$C_n = 13.884$                   | $C_{n1} = C_0 (1 + 8 \times 0,005)$<br>$C_{n1} = C_0 \times 1,04$<br>$C_{n2} = C_0 \times 1,04 (1 + 0,0125 \times 9)$<br>$C_{n2} = C_0 \times 1,04 \times 1,1125$<br>$C_{n2} = 1,157 \times C_0$<br>$13.884 = 1,157 \times C_0$<br><b><math>C_0 = 12.000</math> €</b>                                    |
| <b>EJERCICIO 80</b>                                                                                                                |                                                                                                                                                                                                                                                                                                          |
| $C_0 = X$<br>$i_a = 0,08$ anual<br>$n = 3$ años<br>$C_n = 40.000$ €                                                                | $C_0 = C_n (1 - n \times i_a)$<br>$C_0 = 40.000 (1 - 3 \times 0,08)$<br><b><math>C_0 = 30.400</math> €</b>                                                                                                                                                                                               |
| <b>EJERCICIO 81</b>                                                                                                                |                                                                                                                                                                                                                                                                                                          |
| $I_v = X$<br>$i_a = 0,06$<br>$n = 2$ años                                                                                          | $1 + n \times i_v = \frac{1}{1 - n \times i_a}$<br>$1 + 2 \times i_v = \frac{1}{1 - 2 \times 0,06}$<br>$1 + 2 \times i_v = 1,13636363$<br>$2 \times i_v = 0,13636363$<br>$I_v = 0,0681818$                                                                                                               |
| <b>EJERCICIO 82</b>                                                                                                                |                                                                                                                                                                                                                                                                                                          |
| $i = 0,05$ anual<br>1ª imposición<br>6-oct al 20-dic.<br>$C_0 = 1.000$ €<br>2ª imposición<br>1-nov. al 20 – diciem.<br>$C_0 = 850$ | <b>1ª Imposición</b><br>$C_n = 1.000 (1 + 75 \times 0,05 / 365)$<br><b><math>C_n = 1.010,27</math> €</b><br><br><b>2ª Imposición</b><br>$C_n = 850 (1 + 49 \times 0,05 / 365)$<br><b><math>C_n = 855,71</math> €</b>                                                                                     |
| <b>EJERCICIO 83</b>                                                                                                                |                                                                                                                                                                                                                                                                                                          |
| A crédito: 3/5 de 5.800<br>$n = 18$ meses<br>$i_1 = 0,015$ trimestral<br><br>$i_2 = 0,08$ anual                                    | Pago al contado: $5.800 \times 2/5 = 2.320$<br>Aplazado: $5.800 - 2.320 = 3.480$ €<br><br>$C_{n1} = 3.480 (1 + 18 \times 0,005)$<br><b><math>C_{n1} = 3.793,20</math> €</b><br><br>$3.793,20 = C_0 (1 + 18 \times 0,08 / 12)$<br>$3.793,20 = C_0 \times 1,12$<br><b><math>C_{02} = 3.386,79</math> €</b> |