

UFRJ
Matemática Financeira
Professor Alexandre B. Cunha
Lista 8
Gabarito Sintético

1. 11,6% 0,9188%

2.

$$\text{data 0: } \left(a_0, \frac{a_1}{P_1} P_0, \frac{a_2}{P_2} P_0, \frac{a_3}{P_3} P_0 \right)$$

$$\text{data 1: } \left(\frac{a_0}{P_0} P_1, a_1, \frac{a_2}{P_2} P_1, \frac{a_3}{P_3} P_1 \right)$$

$$\text{data 2: } \left(\frac{a_0}{P_0} P_2, \frac{a_1}{P_1} P_2, a_2, \frac{a_3}{P_3} P_2 \right)$$

$$\text{data 3: } \left(\frac{a_0}{P_0} P_3, \frac{a_1}{P_1} P_3, \frac{a_2}{P_2} P_3, a_3 \right)$$

3.

$$\text{data 0: } \left(a_0, \frac{a_1}{1 + \pi_1}, \frac{a_2}{(1 + \pi_1)(1 + \pi_2)}, \frac{a_3}{(1 + \pi_1)(1 + \pi_2)(1 + \pi_3)} \right)$$

$$\text{data 1: } \left(a_0(1 + \pi_1), a_1, \frac{a_2}{1 + \pi_2}, \frac{a_3}{(1 + \pi_2)(1 + \pi_3)} \right)$$

$$\text{data 2: } \left(a_0(1 + \pi_1)(1 + \pi_2), a_1(1 + \pi_2), a_2, \frac{a_3}{1 + \pi_3} \right)$$

$$\text{data 3: } \left(a_0(1 + \pi_1)(1 + \pi_2)(1 + \pi_3), a_1(1 + \pi_2)(1 + \pi_3), a_2(1 + \pi_3), a_3 \right)$$

4. $R = 10\%$ $r = 4,2735\%$ $\bar{\pi} = 5,4918\%$

$1 + R = 1,1$ $(1 + r)(1 + \bar{\pi}) = 1,042735 \times 1,054918 = 1,100000$ é igual

5. $R = 8\%$ $1 + r = 54/53 \implies r = 1,8868\%$ $\bar{\pi} = 6\%$

$1 + R = 1,08$ $(1 + r)(1 + \bar{\pi}) = (54/53) \times 1,06 = 1,08$ é igual

6. $R = 10\%$ $r = 4,6642\%$ $\bar{\pi} = 4,9571\%$

$1 + R = 1,1$ $(1 + r)(1 + \bar{\pi}) = 1,046642 \times 1,049571 = 1,098525$ não é igual

7. $R = 7\%$ $r = -3,6036\%$ $\bar{\pi} = 11\%$

$1 + R = 1,07$ $(1 + r)(1 + \bar{\pi}) = 0,963964 \times 1,11 = 1,070000$ é igual

8. $R = 6\%$ $r = -3,9525\%$ $\bar{\pi} = 10,6345\%$

$1 + R = 1,06$ $(1 + r)(1 + \bar{\pi}) = 0,960475 \times 1,106345 = 1,062617$ não é igual