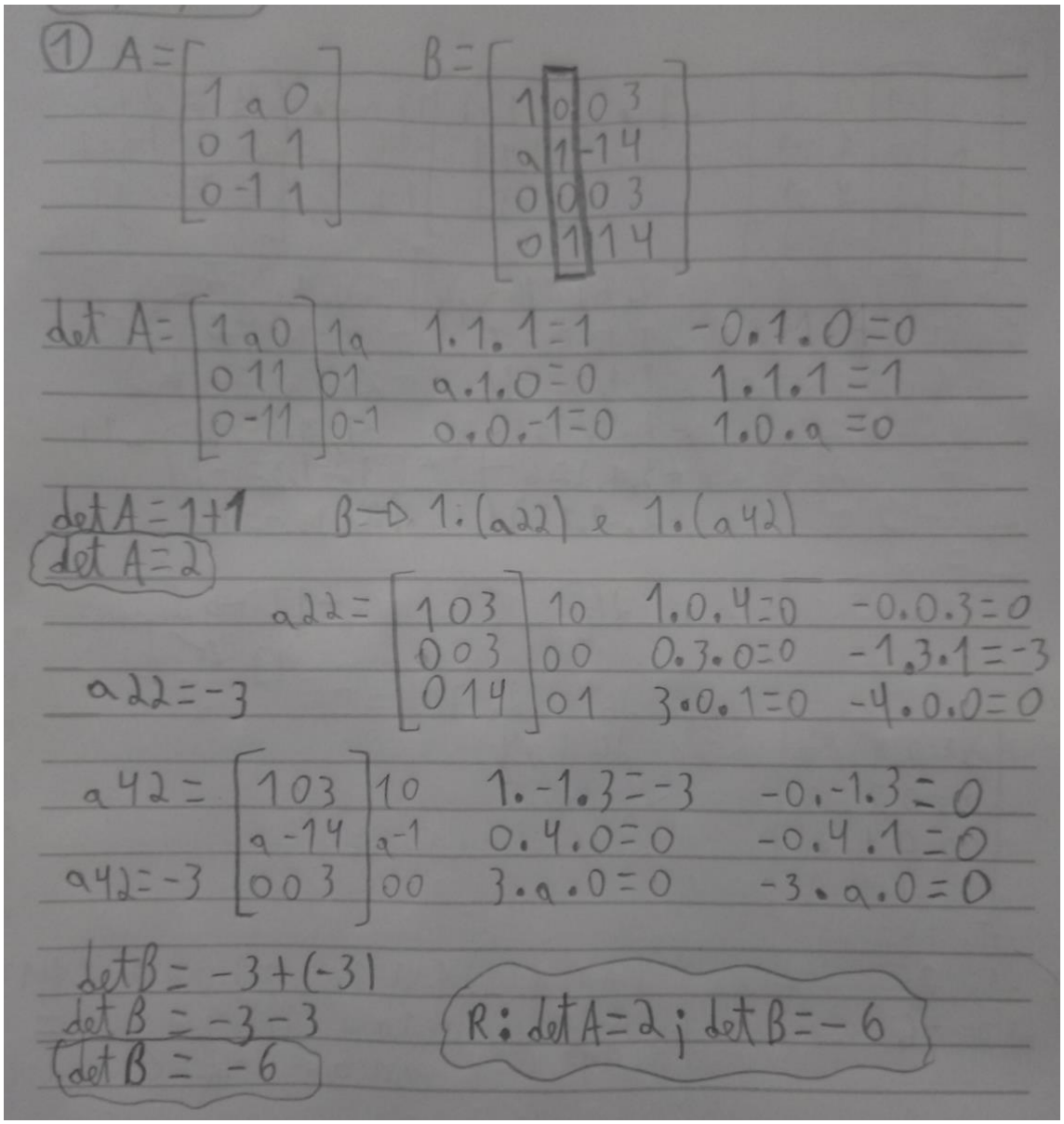
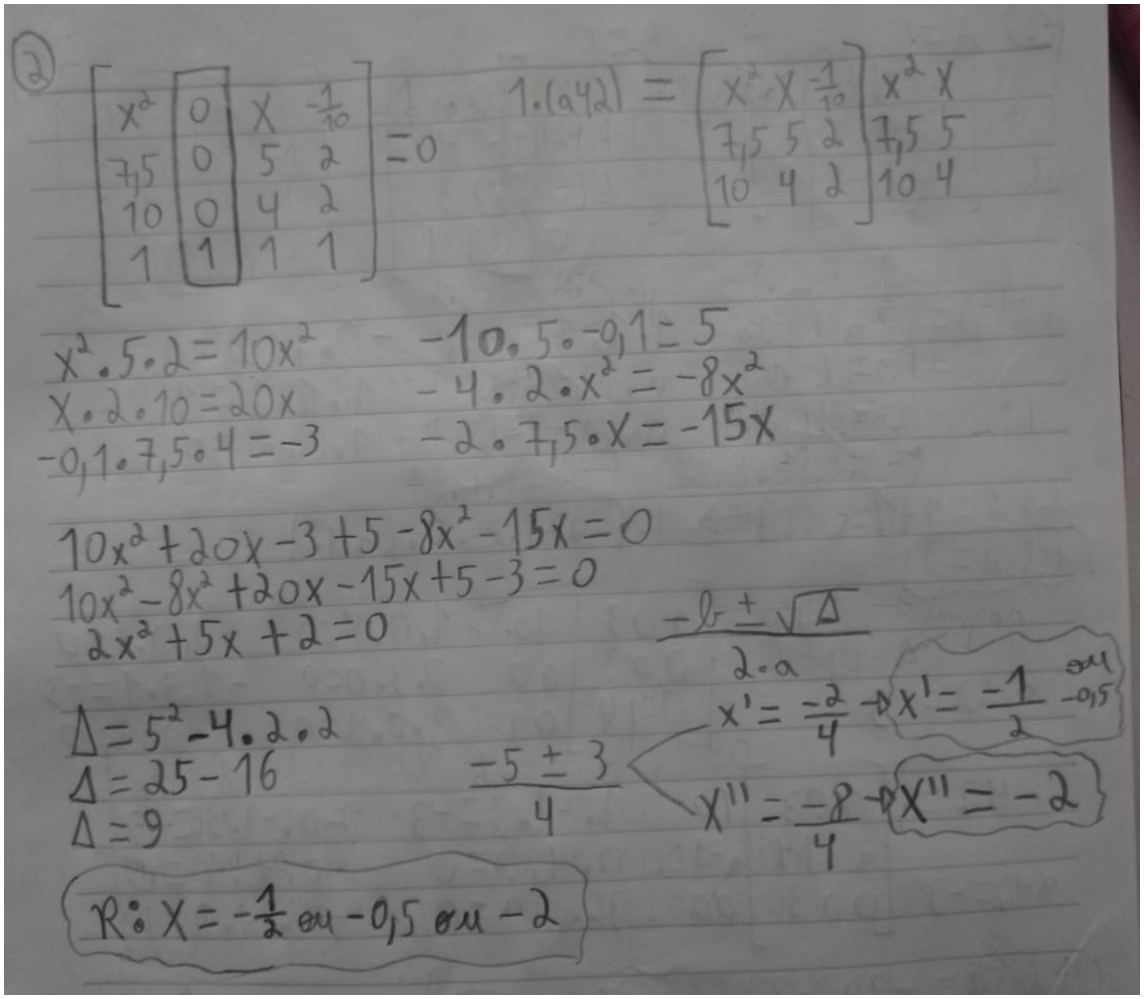
Cálculo Geral de Determinantes:

1.



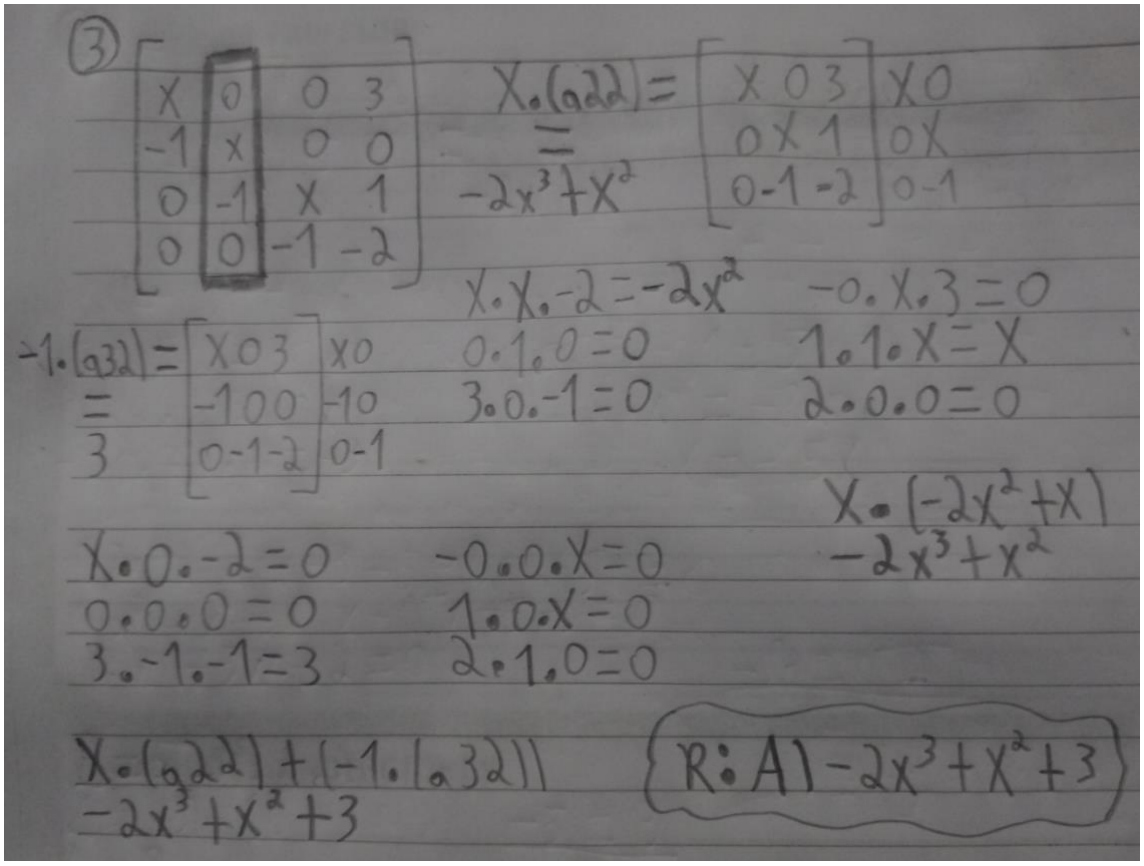
R: det A = 2; det B = -6

2.



R: X = -1/2 ou -0,5; ou X = -2

3.


③
X 0 0 3
-1 X 0 0
0 -1 X 1
0 0 -1 -2
X·(a22) = X 0 3 | X 0
0 X 1 | 0 X
0 -1 -2 | 0 -1
= -2x³ + x²
X·X·-2 = -2x²
0·1·0 = 0
3·0·-1 = 0
-0·X·3 = 0
1·1·X = X
2·0·0 = 0
-1·(a32) = X 0 3 | X 0
-1 0 0 | -1 0
0 -1 -2 | 0 -1
= 3
X·(-2x² + X)
-2x³ + x²
X·0·-2 = 0
0·0·0 = 0
3·-1·-1 = 3
-0·0·X = 0
1·0·X = 0
2·1·0 = 0
X·(a22) + (-1·(a32))
-2x³ + x² + 3
R: A) -2x³ + x² + 3

R: A) $-2x^3 + x^2 + 3$

4.

(4)

$$A = \begin{bmatrix} x & 1 & 0 & 0 & 0 \\ 0 & x & 1 & 0 & 0 \\ 0 & 0 & x & 1 & 0 \\ 0 & 0 & 0 & x & k \\ 0 & 0 & 0 & 1 & x \end{bmatrix} \rightarrow A_{11} = \begin{bmatrix} x & 1 & 0 & 0 \\ 0 & x & 1 & 0 \\ 0 & 0 & x & k \\ 0 & 0 & 1 & x \end{bmatrix} \rightarrow A_{11(11)} = \begin{bmatrix} x & 1 & 0 \\ 0 & x & k \\ 0 & 1 & x \end{bmatrix} \begin{matrix} x & 1 \\ 0 & x \\ 0 & 1 \end{matrix}$$

→ Det = x   → Det = x   → Det = $x^3 - kx$

$\text{Det}A = x$

$\text{Det}A_{11} = x$

$\text{Det}A_{11(11)} = x^3 - kx$

$x \cdot x \cdot x = x^3$

$-1 \cdot k \cdot x = -kx$

$x^3 - kx$

$\text{Det geral} = x \cdot x \cdot (x^3 - kx)$

$\text{Det geral} = x^2 \cdot (x^3 - kx)$

$\text{Det geral} = x^5 - kx^3$

$f(x) = x^5 - kx^3$

$f(-2) = 8$

$f(-2) = (-2)^5 - k \cdot (-2)^3 = 8$

$f(-2) = -32 - 8 \cdot -k = 8$

$f(-2) = -40 \cdot -k = 8$

$f(-2) = -k = \frac{8}{-40}$

$f(-2) = -k = -5 \cdot (-1)$

$f(-2) = k = 5$

$k = 5$

R: D) 5

R: D) 5