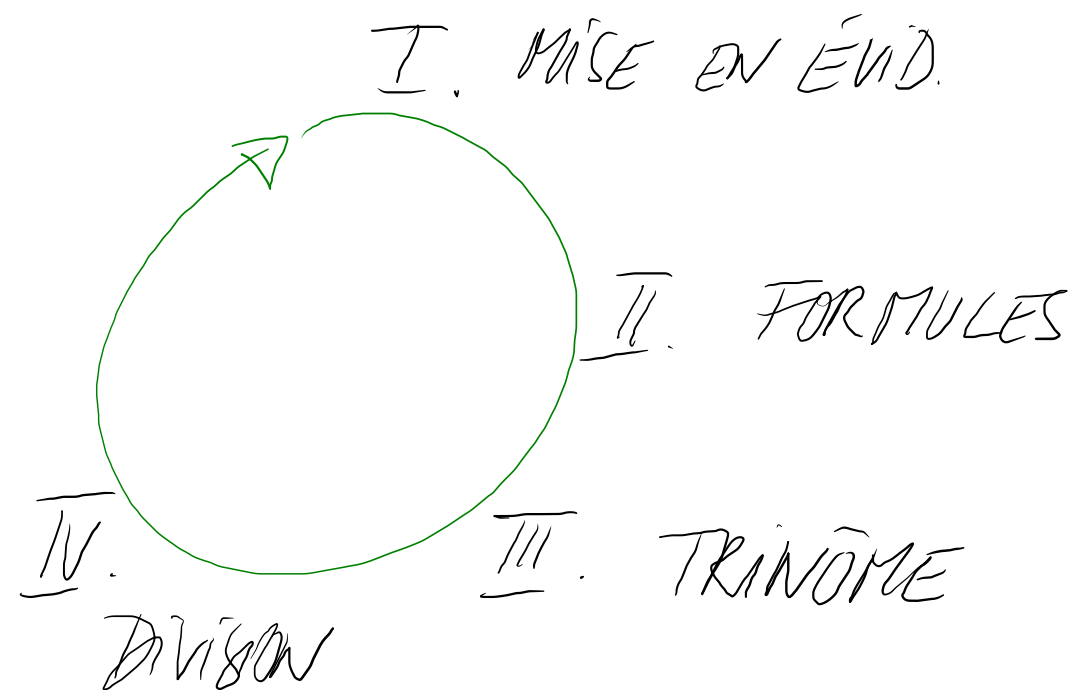


TRINÔME

$$35 = 5 \cdot 7$$

$$2x^2 + bx + c$$



$$\Delta = b^2 - 4ac$$

$$x_1 = \frac{-b + \sqrt{\Delta}}{2a} \quad x_2 = \frac{-b - \sqrt{\Delta}}{2a}$$

$$2x^2 + bx + c = 2(x - x_1)(x - x_2)$$

Example:

$$1 \cdot x^2 - 10x + 24$$

$$\begin{aligned} \Delta &= 100 - 4 \cdot 1 \cdot 24 \\ &= 100 - 96 = 4 \end{aligned}$$

$$x_1 = \frac{10 + \sqrt{4}}{2} = 6$$

$$x_2 = \frac{10 - \sqrt{4}}{2} = 4$$

$$\Rightarrow 1(x^1 - 6)(x^1 - 4) = x^2 - 10x + 24$$

$$x^2 + 19x + 18$$

$$\Delta = 19^2 - 4 \cdot 1 \cdot 18$$

$$\Delta = 289$$

$$\begin{aligned}\sqrt{289} &= \sqrt{\Delta} \\ &= 17\end{aligned}$$

$$= 361 - 72 = 289 = 17^2$$

$$x_1 = \frac{-19 + \sqrt{289}}{2} = -1$$

$$x_2 = \frac{-19 - \sqrt{289}}{2} = -18$$

$$1(x - (-1))(x - (-18)) = (x + 1)(x + 18) = x^2 + 19x + 18$$

$$x^2 - 4x + 4 = (x-2)^2$$

$$A^2 - 2AB + B^2 = (A-B)^2$$

$$\Delta = 16 - 16 = 0$$

$$x_1 = \frac{4 + 0}{2} = 2$$

$$x_2 = \frac{4 - 0}{2} = 2$$

$$x^2 - 4x + 4 = 1(x-2)(x-2)$$

$$2x^2 + 5x - 3$$

$$\Delta = 25 - 4 \cdot 2 \cdot (-3) = 25 + 24 = 49$$

$$x_1 = \frac{-5 + \sqrt{49}}{4}$$

$$x_2 = \frac{-5 - \sqrt{49}}{4}$$

$$= \frac{-5 + 7}{4} = \frac{2}{4} = \frac{1}{2}$$

$$= \frac{-5 - 7}{4} = \frac{-12}{4} = -3$$

$$2x^2 + 5x - 3 = 2 \left(x - \frac{1}{2} \right) (x - (-3)) = 2 \cdot (x - 0,5)(x + 3)$$

3.1 abcdef

3.2 abcdef

3.5 en entier

3.9 abc

3.10 a

TE de janvier

FACTORISER

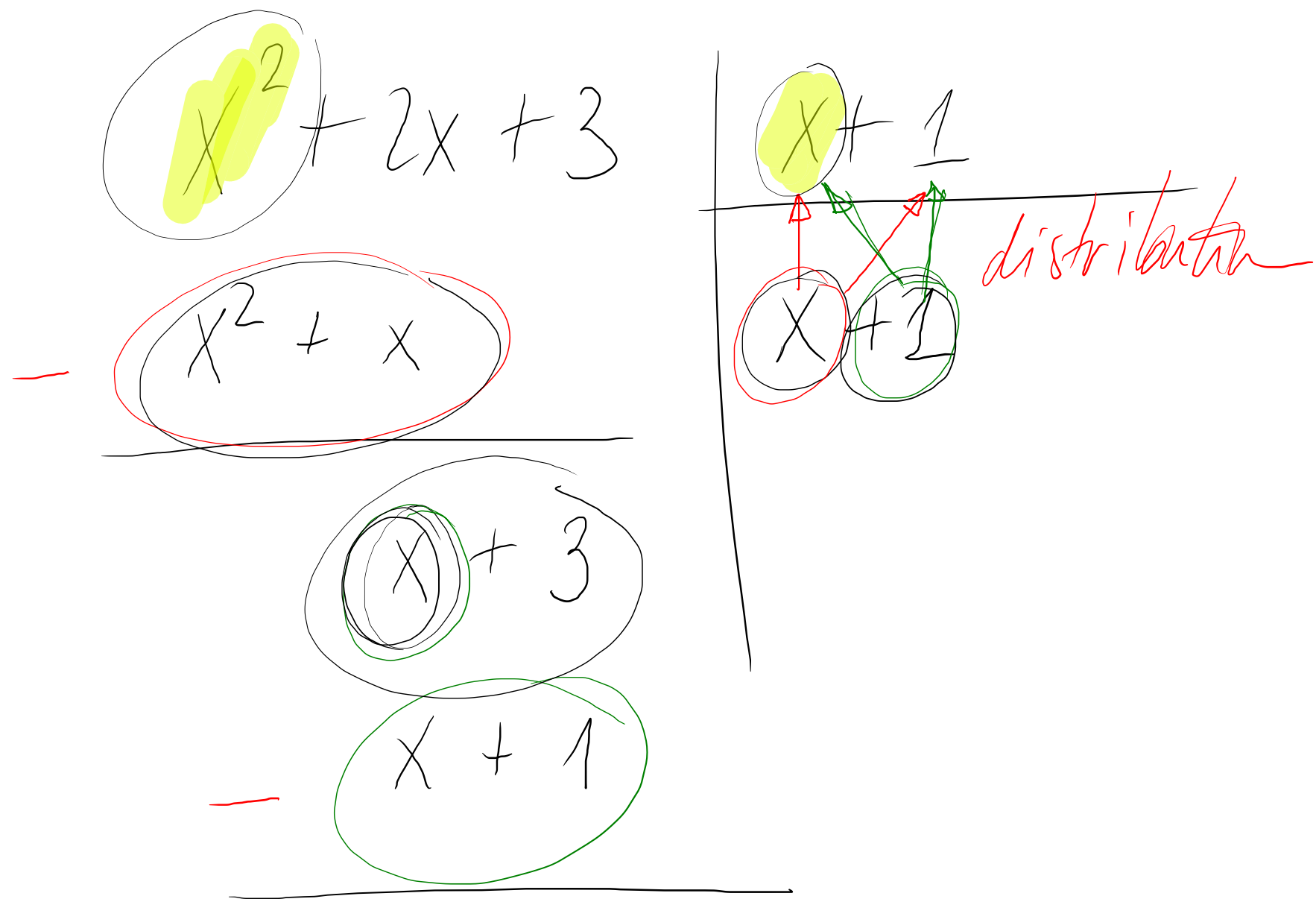
→ mardi 5 décembre

Division

$$\begin{array}{r} 72 \overline{) 17} \\ \underline{4} \\ \end{array}$$

$$\begin{array}{r} 128 \overline{) 13} \\ \underline{9} \\ 11 \end{array}$$

$$128 = 13 - 9 + 11$$



$$x^2 = ? \cdot x$$

$$= x \cdot x = x^2 \checkmark$$

$$x^2 - x^2$$

$$x = ? \cdot x$$

$$x^2 + 2x + 3 = (x + 1)(x + 1) + 2$$

$$X^2 + 5X + 4 = (X+1) \cdot (X+4)$$

$$X^3 + X^2 + X + 1$$

$$\begin{array}{r|l}
 x^2 + 3x - 4 & x - 2 \\
 \hline
 x^2 - 2x & x + 5 \\
 \hline
 5x - 4 & \\
 5x - 10 & \\
 \hline
 & 6
 \end{array}$$

$$x^2 + 3x - 4 = (x - 2)(x + 5) + 6$$

$$\begin{array}{r|l}
 2x^2 + x + 1 & x + 2 \\
 \hline
 2x^2 + 4x & 2x - 3 \\
 \hline
 -3x + 1 & \\
 -3x - 6 & \\
 \hline
 & 7
 \end{array}$$

$$2x^2 = x \cdot (?)$$

$$-3x = x \cdot (-3)$$

$$2x^2 + x + 1 = (x + 2)(2x - 3) + 7$$

$$4 = x \cdot \dots ?$$

$$x^3 - 3x^2 + 2x + 4$$

$$x^3 - 2x^2$$

$$-x^2 + 2x + 4$$

$$-x^2 + 2x$$

$$4$$

$$\begin{array}{r} x - 2 \\ \hline x^2 - x \end{array}$$

$$-x^2 = x \cdot (-x)$$

$$x^3 - 3x^2 + 2x + 4 = (x-2)(x^2-x) + 4$$

$$3x^3 - 2x^2 + 4x - 8$$

$$3x^3 - 15x^2$$

$$13x^2 + 4x - 8$$

$$13x^2 - 65x$$

$$69x - 8$$

$$69x - 345$$

$$337$$

$$\begin{array}{r} \textcircled{x} - 5 \\ \hline \end{array}$$

$$3x^2 + 13x + 69$$

$$3x^3 - 2x^2 + 4x - 8 = (x - 5)(3x^2 + 13x + 69) + 337$$

x^3