

2.1.1 l

→ MERCREDI 13 SEPT.

2.1.3 d k

2.1.4 h

2.1.5 d

2.1.9 g

2.1.10 i

2.2.1 (1 sur 3)

2.2.2 (1 sur 3)

FACTORISER

«ART»

$$108 = 2 \cdot 54$$

$$= 2 \cdot 2 \cdot 27$$

$$= 2 \cdot 2 \cdot 3 \cdot 3 \cdot 3$$

$$= 2^2 \cdot 3^3$$

$$x^2 + x = x \cdot (x + 1)$$

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

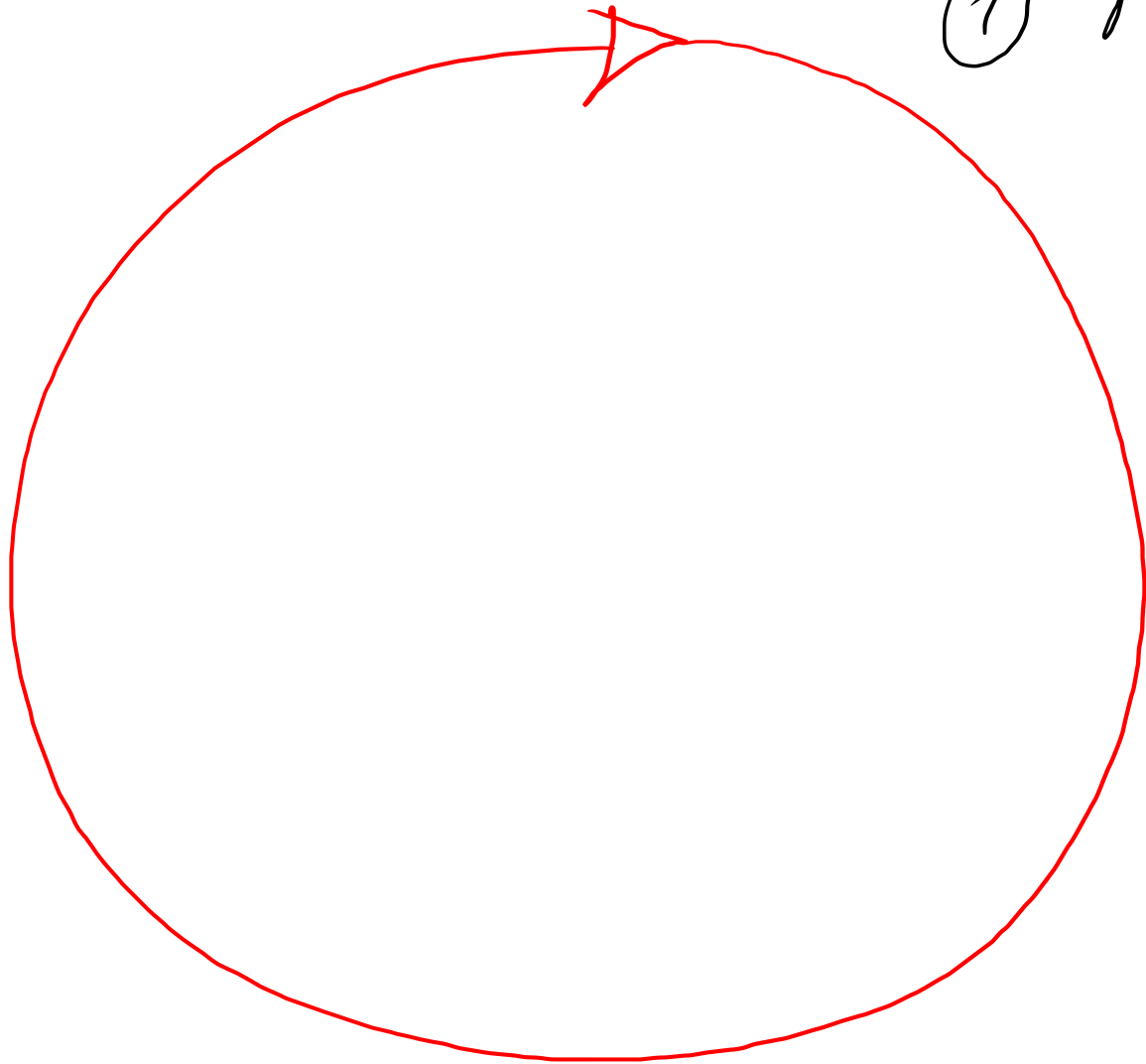
$$\boxed{4y - 4xy + yx^2}$$

$$= y \overset{A^2 - 2AB + B^2}{(4 - 4x + x^2)}$$

$$= y(2 - x)^2 \checkmark$$

① MISE EN ÉVIDENCE

② IDENTITÉS REM.



$$a^2 - 4ab + b^2$$

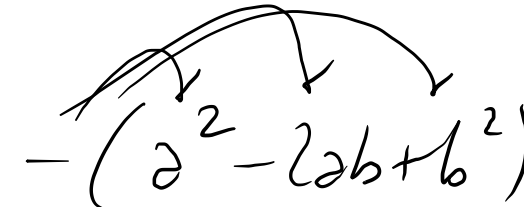
$$a = 4$$

$$b = 3$$

$$16 - 48 + 9$$

$$-23$$

$$2a(a-b) - (a-b)^2 = 2a^2 - 2ab - (a^2 - 2ab + b^2)$$



$$= 2a^2 - 2ab - a^2 + 2ab - b^2 = a^2 - b^2$$

$$2a \boxed{(a-b)} - \boxed{(a-b)}(a-b) =$$

X

X

$$X (2a - (a-b)) =$$

$$(a-b) (\overbrace{2a - a}^a + b)$$

$$\boxed{(a-b)(a+b)}$$

$$a^m \cdot a^n = a^{m+n}$$

$$\frac{a^m}{a^n} = a^{m-n}$$

$$(a^m)^n = a^{m \cdot n}$$

$$(a \cdot b)^n = a^n \cdot b^n$$

$$\left(\frac{a}{b}\right)^n = \frac{a^n}{b^n}$$

$$\left(u + \frac{v}{4}\right) \left(\frac{3u}{4} - \frac{5v}{6}\right) =$$

$$\frac{1}{4} (4u + v) \frac{1}{12} (9u - 10v) =$$

$$\frac{1}{48} (4u + v) (9u - 10v) =$$

$$\frac{1}{48} (36u^2 - 31uv - 10v^2)$$

$$= \frac{3}{4} u^2 - \frac{31}{48} uv - \frac{5}{24} v^2$$

2.1.3 R

$$(b^2 - c^3) (b^2 c^3 + b^4 + c^6)$$

$$A^3 - B^3 =$$

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

$$(b^2 - c^3) (b^4 + b^2 c^3 + c^6) = (b^2)^3 - (c^3)^3$$

$A \qquad B$

$$= b^6 - c^9$$

$$(b^2)^2 + b^2 c^3 + (c^3)^2$$

$b^4 \qquad c^6$

$$X \cdot A + Y \cdot A = (X + Y) \cdot A$$

$$\underbrace{(2x+6)}_X \cdot \underbrace{(2x+y)}_A + \underbrace{(3x+5b)}_Y \cdot \underbrace{(2x+y)}_A$$

$$2^m - 2^n \neq 2^{m-n}$$

$$2^4 - 2^3 = 16 - 8 = 8 \neq 2^{4-3} = 2^1 = 2$$

$$\begin{aligned} A^3 - A^2 &= A^2 \cdot A - A^2 \cdot 1 \\ &= A^2 (A - 1) \end{aligned}$$

$$\underbrace{(u+v)^3}_A - \underbrace{(u+v)^2}_A$$

$$\boxed{(u+v)^2} (u+v) - \boxed{(u+v)^2} \cdot 1 =$$

$$(u+v)^2 (u+v - 1)$$

$$\begin{aligned} x^2 + x &= x \cdot x + \underbrace{x \cdot 1}_1 \\ &= x(x+1) \end{aligned}$$

$$\underbrace{(x-3)}_A (x+1) + 2 \underbrace{(x-3)(x-3)}_A - \underbrace{(x-3)}_A \cdot 1 =$$

$$(x-3) \left[(x+1) + 2(x-3) - 1 \right] =$$

$$\begin{aligned} (x-3) (\underbrace{3x-6}) &= (x-3) (3x-3 \cdot 2) \\ &= (x-3) \cdot 3 \cdot (x-2) \end{aligned}$$