Identités

$(a+b)^2 = a^2 + 2ab + b^2$	$(a-b)^2 = a^2 - 2ab + b^2$
$(a+b)^3 = a^3 + 3a^2b + 3ab^2 + b^3$	$(a-b)^3 = a^3 - 3a^2b + 3ab^2 - b^3$
$(a+b)^n = \binom{n}{0}a^n + \binom{n}{1}a^{n-1}b + \binom{n}{2}a^{n-2}b^2 + \ \ldots \ + \binom{n}{k}a^{n-k}b^k + \ \ldots \ + \binom{n}{n}b^n$ coefficients binomiaux $\binom{n}{k}$, voir page 7	
$a^2 - b^2 = (a-b)(a+b)$	$a^2 + b^2$ n'est pas factorisable dans les réels
$a^3 - b^3 = (a-b)(a^2 + ab + b^2)$	$a^3 + b^3 = (a+b)(a^2 - ab + b^2)$
$a^n - b^n = (a-b)(a^{n-1} + a^{n-2}b + \ \ldots \ + ab^{n-2} + b^{n-1})$	
$(a+b+c)^2 = a^2 + b^2 + c^2 + 2ab + 2bc + 2ac$	

$\boxed{n \in \mathbb{N}}$

$1 + 2 + \dots + n$

$1 \qquad n = 1$

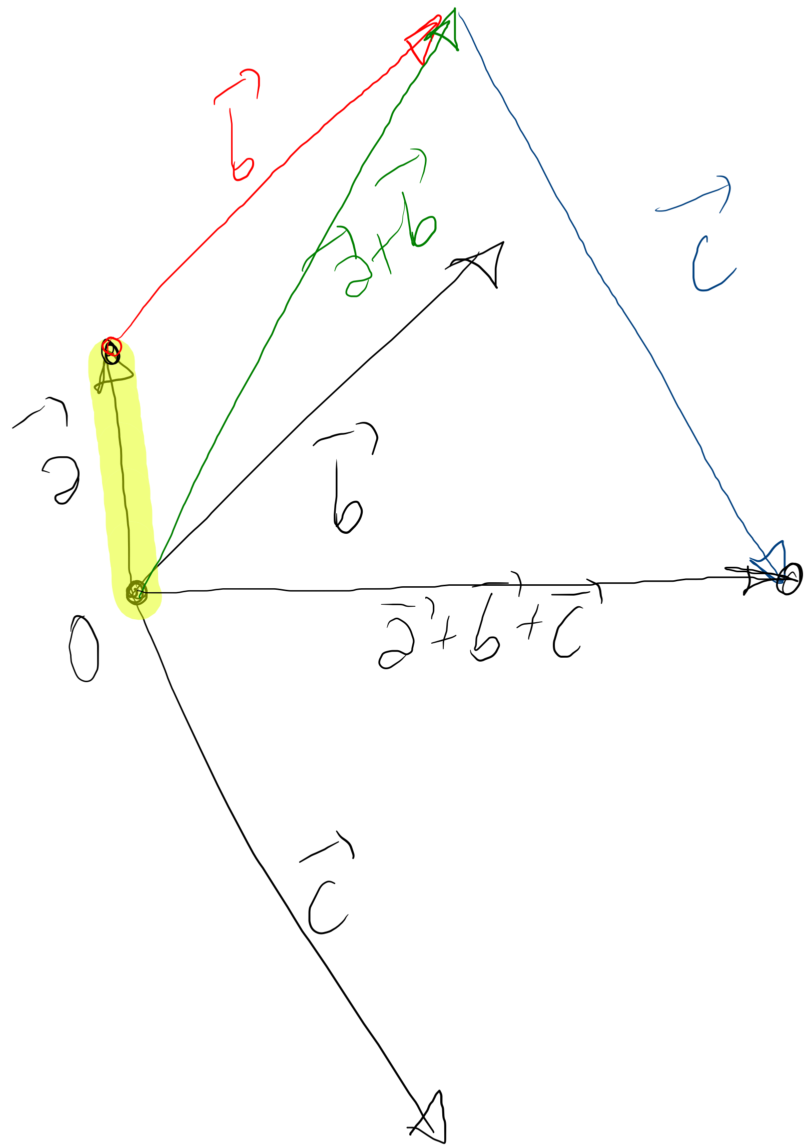
$1 + 2 \qquad n = 2$

$1 + 2 + 3 \qquad n = 3$

$1 + 2 + 3 + 4 \qquad n = 4$

$1 + 2 + 3 + 4 + 5 + 6 + 7 + 8 \qquad n = 8$

$1 + 2 + 3 + 4 + \dots + n$



$\vec{b}$
$\vec{a}+\vec{b}$
$\vec{c}$
$\vec{a}$
$\vec{b}$
O
$\vec{a}+\vec{b}+\vec{c}$
$\vec{c}$

	$2x^3$	$-3x^2$	$5x$	-1
$3x^3$	$6x^6$	$-9x^5$	$15x^4$	
$2x^2$	$4x^5$	$-6x^4$		
$-4x$	$-8x^4$			
2				

$$(2x^3-3x^2+5x-1)(3x^3-2x^2-4x+2) = 6x^6-4x^5-8x^4+4x^3+\dots$$

1	1
2	2
4	
8	
16	
32	
64	
⋮	
2^n	n

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

$$\frac{4u}{4} + \frac{3u}{4} + \frac{v}{4} - \frac{5v}{6} =$$

$$\frac{7u}{4} + \frac{6v - 4 \cdot 5v}{24} = \frac{7u}{4} + \frac{-14v}{24}$$

$$= \frac{7u}{4} - \frac{7v}{12}$$

$$\frac{18-20}{24} = \frac{3}{4} - \frac{5}{6} = \frac{9-10}{12} = -\frac{1}{12}$$

$$\boxed{\frac{a}{b} - \frac{c}{d} = \frac{ad-bc}{bd}}$$

$$A - (B - C) = A - B - (-C)$$

$$= A - B + C$$

$$\boxed{\begin{aligned} p(x) &= x^2 + 3 \\ q(x) &= 6x \end{aligned}}$$

$\deg(p) = 2$

$\deg(6) = 0$

$\deg(q) = 1$

$$r(a, b, c) = a^2 + 2ab^2 - 3c^3 + abc$$

$\deg(r) = 3$