31/1/2020

586 $2m^2 + 12m + 16 = 2(m^2 + 6m + 8) =$

$= 2(m+4)(m+2)$

601 $z^4 - 4z^2 - 4z - 1 =$

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

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

$= (z^2 - (2z+1))(z^2 + (2z+1)) =$

$= (z^2 - 2z - 1)(z^2 + 2z + 1) =$

$\Delta = (-2)^2 - 4 \cdot 1 \cdot (-1) =$

$= 4 + 4 = 8 > 0$

$\Delta = 2^2 - 4 \cdot 1 \cdot 1 = 0$ è un quadrato

$= (z^2 - 2z - 1)(z+1)^2$

$ax^2 + bx + c$

$\Delta = b^2 - 4ac$

$> 0 \Rightarrow$ si può scomporre

$< 0 \Rightarrow$ non si può scomporre

$= 0 \Rightarrow$ quadrato

607 $x^6 + 7x^3 - 8 = (x^3 - 1)(x^3 + 8) =$

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

620 $4a^4 - 9a^2 + 5 =$

$S = -9$
$P = 4 \cdot 5 = 20 \Rightarrow -4, -5$

$= 4a^4 - 4a^2 - 5a^2 + 5 =$

$= 4a^2(a^2 - 1) - 5(a^2 - 1) =$

$= (a^2 - 1)(4a^2 - 5) = (a - 1)(a + 1)(4a^2 - 5)$

590 $x^3 - 4x^2 - 3x + 18$

DIVISORI 18
$\pm 1 \ \pm 2 \ \pm 3$
$\pm 6 \ \pm 9$

$1 \mapsto \quad 1 - 4 - 3 + 18 \neq 0$

$-1 \mapsto \quad -1 - 4 + 3 + 18 \neq 0$

$2 \mapsto \quad 8 - 16 - 6 + 18 \neq 0$

$-2 \mapsto \quad -8 - 16 + 6 + 18 = 0$

	1	−4	−3	18
−2		−2	12	−18
	1	−6	9	//

$(x^2 - 6x + 9)(x + 2) = (x - 3)^2(x + 2)$

606 $x^4 - 5x^2 - 36 =$

$= (x^2 - 9)(x^2 + 4) = (x-3)(x+3)(x^2+4)$

591 $(k+1)^2 + 2(k+1) + 1 =$

$= \left[(k+1)+1\right]^2 = (k+2)^2$

609 $4x^3 - xy^2 - 8x^3 - y^3 =$

$= x(4x^2 - y^2) - (8x^3 + y^3) =$

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

$= (2x+y)\left[x(2x-y) - (4x^2 - 2xy + y^2)\right] =$

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

$= (2x+y)(-2x^2 + xy - y^2) =$

$= -(2x+y)(2x^2 - xy + y^2)$