

13/1/2020

$$\mathbf{91} \quad 4a^2x^4 + 6a^4x^3 + 4a^3x^2 + 6a^5x =$$

$$= 2a^2x \left(2x^3 + 3a^2x^2 + 2ax + 3a^3 \right) =$$

$$= 2a^2x \left[x^2(2x + 3a^2) + a(2x + 3a^2) \right] =$$

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

RISOLUZIONE DEL LUCCHINI

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

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

$$= (2x + 3a^2) \left[2a^2x(x^2 + a) \right] = 2a^2x(2x + 3a^2)(x^2 + a)$$

68 $ab - a - 3(b - 1)(b + 2) =$

$$= a(b-1) - 3(b-1)(b+2) =$$

$$= (b-1)[a - 3(b+2)] =$$

$$= (b-1)(a - 3b - 6)$$

DIFFERENZA DI QUADRATI

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

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

$$A = 2x \quad B = y^2$$

$$16a^2x^6 - 25a^4y^{10} = (4ax^3)^2 - (5a^2y^5)^2 =$$

$$= (4ax^3 - 5a^2y^5)(4ax^3 + 5a^2y^5)$$

$$(x+1)^2 - y^2 = [(x+1) - y][(x+1) + y] =$$

$$= (x+1-y)(x+1+y)$$

ATTENZIONE AL CAMBIO SEGNO!!

$$y^2 - (x+1)^2 = [y - (x+1)][y + (x+1)] =$$

$$= (y - x - 1)(y + x + 1)$$

$$(x - 2y)^2 - (y - z)^2 =$$

$$= [(x - 2y) - (y - z)][(x - 2y) + (y - z)] =$$

$$= (x - 2y - y + z)(x - 2y + y - z) =$$

$$= (x - 3y + z)(x - y - z)$$

QUADRATO DI BINOMIO

153 $x^4 - 4x^2y + 4y^2 =$

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

$$\frac{1}{16}a^4b^6 + \frac{1}{2}a^2b^3 + 1 =$$

$$= \left(\frac{1}{4}a^2b^3 + 1\right)^2$$