

22/1/2020

327 $6u^2 + 5u - 6 =$

$$\begin{array}{l} S = 5 \\ P = -36 \end{array} \Rightarrow 9, -4$$

$$= 6u^2 + 9u - 4u - 6 =$$

$$= 3u(2u+3) - 2(2u+3) =$$

$$= (2u+3)(3u-2)$$

$$4y^2 - 21y - 18 =$$

$$\begin{array}{l} S = -21 \\ P = -72 \end{array} \Rightarrow -24, 3$$

$$= 4y^2 - 24y + 3y - 18 =$$

$$= 4y(y-6) + 3(y-6) =$$

$$= (y-6)(4y+3)$$

307 $t^2 + t - 20 =$

$$\begin{array}{l} S = 1 \\ P = -20 \end{array} \Rightarrow 5, -4$$

$$= (t+5)(t-4)$$

$$x^2 - 3x - 28 =$$

$$\begin{array}{l} S = -3 \\ P = -28 \end{array} \Rightarrow -7, 4$$

$$= (x-7)(x+4)$$

334 $2x^2 - 5ax - 3a^2 =$

$$S = -5a$$

$$P = 2(-3a^2) = -6a^2$$

$$\begin{array}{cc} -6a & \frac{1a}{a} \end{array}$$

$$= 2x^2 - 6ax + ax - 3a^2 =$$

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

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

$$9x^2 - 6ax - 8a^2 =$$

$$S = -6a$$

$$P = -72a^2 \Rightarrow -12a \quad 6a$$

$$= 9x^2 - 12ax + 6ax - 8a^2 =$$

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

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

$$\begin{array}{l|l}
 x^2 + mx - 2m^2 = & x^2 + 4ax - 12a^2 = (x-2a)(x+6a) \\
 \left. \begin{array}{l} S = m \\ p = -2m^2 \end{array} \right| \Rightarrow 2m \quad -1m & \left. \begin{array}{l} S = 4a \\ p = -12a^2 \end{array} \right| \Rightarrow -2a \quad 6a \\
 = (x+2m)(x-m) &
 \end{array}$$

$$\text{342 } x^4 - x^2 - 2 =$$

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

$$\left. \begin{array}{l} S = -1 \\ p = -2 \end{array} \right| \Rightarrow -2 \quad 1$$

$$x^6 + 4x^3 - 12 =$$

$$\left. \begin{array}{l} S = 4 \\ p = -12 \end{array} \right| \Rightarrow 6 \quad -2$$

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

$$\text{347 } 2a^2b^2 + 11ab - 6 =$$

$$\left. \begin{array}{l} S = 11 \\ p = -12 \end{array} \right| \Rightarrow 12 \quad -1$$

$$= 2a^2b^2 + 12ab - ab - 6 =$$

$$= 2ab(ab + 6) - (ab + 6) =$$

$$= (ab + 6)(2ab - 1)$$

$$m^6n^6 + m^3n^3 - 20 =$$

$$\left. \begin{array}{l} S = 1 \\ p = -20 \end{array} \right| \Rightarrow 5 \quad -4$$

$$= (m^3n^3 + 5)(m^3n^3 - 4)$$

ESERCIZI DI RIEPILOGO

$$\begin{aligned} \text{382} \quad a^2x^3 - a^6x &= a^2x(x^2 - a^4) = \\ &= a^2x(x - a^2)(x + a^2) \end{aligned}$$

$$\begin{aligned} \text{383} \quad 2a^3 - 12a^2 + 18a &= 2a(a^2 - 6a + 9) = \\ &= 2a(a - 3)^2 \end{aligned}$$

$$\begin{aligned} \text{384} \quad x^3y + x^2y^2 - x - y &= \\ &= x^2y(x + y) - (x + y) = (x + y)(x^2y - 1) \end{aligned}$$

$$\begin{aligned} \text{385} \quad x^8 - 16x^4 &= \\ &= x^4(x^4 - 16) = x^4(x^2 - 4)(x^2 + 4) = \\ &= x^4(x - 2)(x + 2)(x^2 + 4) \end{aligned}$$

$$\text{386} \quad 2x^2 - 2x - 12 = 2(x^2 - x - 6) = 2(x - 3)(x + 2)$$

$$415 \quad a^2 - b^2 + ax + bx =$$

$$= (a-b)(a+b) + x(a+b) =$$

$$= (a+b)(a-b+x)$$

$$417 \quad 4x^2 - y^2 - 2x + y =$$

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

$$= (2x-y)(2x+y-1)$$

$$422 \quad (2a-1)^3 - 4a^2 + 1 =$$

$$= (2a-1)^3 - (4a^2-1) =$$

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

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

$$= (2a-1) \left[4a^2 - 4a + \cancel{1} - 2a - \cancel{1} \right] =$$

$$= (2a-1)(4a^2-6a) =$$

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