SCHEDA DI LAVORO: frazione algebriche ed equazioni RIEPILOGO

RISOLVI LE SEGUENTI ESPRESSIONI CONTENTI TUTTE LE OPERAZIONI TRA FRAZIONI ALGEBRICHE

235 $\left(\dfrac{1}{a+b} - \dfrac{b}{a^2-ab} + \dfrac{b^2}{a^3-ab^2}\right) : \left(\dfrac{1}{a+b} + \dfrac{b}{a^2-b^2}\right)$ $\qquad \left[\dfrac{a-2b}{a}\right]$

236 $\dfrac{3x}{x^3-x^2-x+1} - \dfrac{3x}{2-2x^2} + \dfrac{x-2}{4x-2x^2-2}$ $\qquad \left[\dfrac{x+1}{(x-1)^2}\right]$

237 $\left(\dfrac{x^2}{y^2} + \dfrac{x}{y} + 1\right)\left(\dfrac{x^2}{y^2} - \dfrac{x}{y} + 1\right)$ $\qquad \left[\dfrac{x^4+x^2y^2+y^4}{y^4}\right]$

238 $\left[\dfrac{2(x-y)^2}{(x+y)} \cdot \dfrac{28}{3(y-x)} \cdot \left(-\dfrac{x+y}{8}\right) - \dfrac{x-y}{3}\right] : (x-y)$ $\qquad [2]$

239 $\dfrac{1}{x-y} - \dfrac{x-y}{x^2+xy+y^2} + \dfrac{y^2}{y^3-x^3}$ $\qquad \left[\dfrac{y(3x-y)}{x^3-y^3}\right]$

240 $\left(1 + \dfrac{1}{a^2+a}\right)\left(1 + \dfrac{1}{a^2-a}\right) : \left(\dfrac{a+1}{a^2} + 1\right) : \dfrac{1}{a^2-1}$ $\qquad [a^2-a+1]$

241 $\dfrac{5}{a^2-2a+1} - \dfrac{a^2-14a-7}{2a^2-a^4-1} - \dfrac{2}{a^2+2a+1}$ $\qquad \left[\dfrac{4}{(a+1)(a-1)}\right]$

242 $\dfrac{x^2+5x+4}{x^2+7x+12} : \dfrac{2x+2}{3x+9} : \dfrac{14x+14y}{9}$ $\qquad \left[\dfrac{27}{28(x+y)}\right]$

243 $\dfrac{x^2+5x+4}{x^2+7x+12} : \left(\dfrac{2x+2}{3x+9} : \dfrac{14x+14y}{9}\right)$ $\qquad \left[\dfrac{7}{3}(x+y)\right]$

RISOLVI LE SEGUENTI EQUAZIONI NUMERICHE INTERE

14 $\dfrac{x}{3} + \dfrac{1}{2} = \left[\dfrac{1-x}{3} + \left(\dfrac{x}{3} + \dfrac{2-6x}{3}\right) - \dfrac{x+1}{2}\right] + \dfrac{1}{3}x$ $\qquad [0]$

15 $x(1-2x) - \left(\dfrac{4x+2}{2}\right)(1-x) + 2\left[3\left(x-\dfrac{1}{3}\right) - \dfrac{2x+1}{2}\right] = 4x-4$ $\qquad$ [indeterminata]

16 $\dfrac{4}{3} \cdot \left\{x - 3 \cdot \left[1 - x + \dfrac{1}{3} \cdot \left(x - \dfrac{5}{2}\right) - 2 \cdot \left(2x + \dfrac{1}{2}\right)\right]\right\} = 21x + \dfrac{10}{3}$ $\qquad [0]$

17 $3 \cdot (x-1)^2 - 2 \cdot [(x-2) \cdot (x+2) - 2x] = (3-x)^2 - 3 \cdot (2x-1)$ $\qquad \left[\dfrac{1}{10}\right]$

18 $(x+1)^3 - x^2 \cdot (x+3) = 3 \cdot (x+1)$ $\qquad$ [impossibile]

19 $2x \cdot (x+1) + (x-2) \cdot \left(2x - \dfrac{1}{2}\right) = \left(2x - \dfrac{1}{2}\right)^2 - \dfrac{7}{6}x$ $\qquad \left[-\dfrac{9}{8}\right]$