

Equazioni fratte, riconducibili ad equazioni di primo grado

Sul libro di testo: esercizi svolti, come esempio, a pag. 555

Esercizi consigliati: pagg. 556, 557 numeri da 145 a 177 e i seguenti:

$$1. \quad \frac{1}{3-2x} + \frac{3}{2x^2-3x} + \frac{5}{x} = 0 \quad S = \left\{ \frac{4}{3} \right\}$$

$$2. \quad \frac{1+x}{3x-3} - \frac{1+2x}{x+1} = \frac{3x-5x^2+6}{3x^2-3} \quad S = \emptyset$$

$$3. \quad \frac{3}{1-4x+4x^2} + \frac{2}{4x+2} + \frac{1}{1-2x} = 0 \quad S = \left\{ -\frac{5}{2} \right\}$$

$$4. \quad \frac{1+x}{2x+4} - \frac{1}{x^2+2x} + \frac{1+x}{2x} = 1 \quad \text{indeterminata : } S = \{ \forall x : x \neq -2 \wedge x \neq 0 \}$$

$$5. \quad \frac{2}{2x^2+2x-12} = \frac{1}{x^2-3x+2} - \frac{1}{x^2+2x-3} \quad S = \{6\}$$

$$6. \quad \frac{3}{x^2-1} - \frac{3}{x^2-x-2} - \frac{1}{x^2-3x+2} = 0 \quad S = \{-4\}$$

$$7. \quad \frac{x^3+4x^2+x-1}{x^3+4x^2-4x-16} = 1 \quad S = \{-3\}$$

$$8. \quad \frac{x-4}{2x-10} - \frac{1}{x^2-8x+15} + \frac{x-4}{2x-6} = 1 \quad \text{indeterminata : } S = \{ \forall x : x \neq 3 \wedge x \neq 5 \}$$

$$9. \quad \left(\frac{x+5}{x+1} - 1 \right) : x - \left(\frac{1}{x-1} - \frac{1}{x} \right) = \frac{2}{x^2-1} \quad S = \{5\}$$

$$10. \quad \frac{1}{x} \left(\frac{1}{x-1} - 2 \right) + 2 \left(\frac{2}{x+1} - \frac{1}{x} \right) + \frac{4}{3x^2-3} = 0 \quad S = \{3\}$$

$$11. \quad \frac{x}{x^2-4} - \frac{1}{x-2} + \frac{2}{x^2+4x+4} = 0 \quad S = \emptyset$$

$$12. \quad \frac{4+x}{x} - \frac{1+x}{4+x} - \frac{3+x}{x^2+4x} = \frac{11+6x}{x^2+8x+16} \quad S = \{-2\}$$

$$13. \quad \left(\frac{x}{12} - \frac{12}{x} \right) : \left(1 + \frac{12}{x} \right) = \frac{x-12}{12} \quad \text{indeterminata : } S = \{ \forall x : x \neq -12 \wedge x \neq 0 \}$$

$$14. \quad \frac{1}{x^2+x-6} = \frac{2}{x^2-3x+2} - \frac{1}{x^2+2x-3} \quad S = \emptyset$$