Lezione 49

Riepilogo equazioni di 1° grado intere

$$\frac{x-2}{6} = \frac{x-2}{2} - \frac{x-2}{3}$$

$$\cancel{6}\ \frac{x-2}{\cancel{6}} = \frac{3(x-2)-2(x-2)}{\cancel{6}}\ \cancel{6}$$

$$x-2 = 3x-6-2x+4$$

$$x-3x+2x = -6+4+2 \Rightarrow 0x = 0 \Rightarrow \boxed{0=0}$$

indeterminata

$$\frac{5}{2} - \frac{3}{4}\left(\frac{1}{3} - \frac{x}{2}\right) - \left(\frac{2x-5}{6} - \frac{1}{1}\right) = 1$$

$$\frac{5}{2} - \frac{3}{4} + \frac{3}{8}x - \left(\frac{2x-5-6}{6}\right) = 1$$

$$\frac{5}{2} - \frac{1}{4} + \frac{3}{8}x - \left(\frac{2x-11}{6}\right) = 1$$

$$\frac{5}{2} - \frac{1}{4} + \frac{3}{8}x - \frac{(2x-11)}{6} = \frac{1}{1}$$

$$\frac{60 - 6 + 9x - 4(2x-11)}{24} = \frac{24}{24}$$

$$60 - 6 + 9x - 8x + 44 = 24$$

$$9x - 8x = -60 + 6 - 44 + 24$$

$$x = -54 - 44 + 24 = -98 + 24 = -74$$

$$\boxed{x = -74}$$

$$\frac{x}{60} + \frac{2}{15}(3x-1) + \frac{2x-1}{10} = \frac{3x+1}{3} - 9$$

$$\frac{x}{60} + \frac{6x-2}{15} + \frac{2x-1}{10} = \frac{3x+1}{3} - \frac{9}{1}$$

$$\frac{x + 4(6x-2) + 6(2x-1)}{60} = \frac{20(3x+1) - 9}{60}$$

$$x + 24x - 8 + 12x - 6 = 60x + 20 - 540$$

$$x + 24x - 60x + 12x = 20 - 540 + 8 + 6$$

$$-35x + 12x = -506$$

$$-23x = -506$$

$$x = \frac{506}{23} = 22$$

$$\frac{(x-2)(x+2)}{4} - \frac{3x^2-2x}{12} + \frac{1-2x}{3} = -\frac{1-x}{2} - \frac{5}{4}$$

$$\frac{3(x^2-4)-(3x^2-2x)+4(1-2x)}{12} = \frac{-6(1-x)-15}{12} \quad \times 12$$

$$3x^2 - 12 - 3x^2 + 2x + 4 - 8x = -6 + 6x - 15$$

$$-6x - 6x = -6 - 15 + 12 - 4$$

$$-12x = -13$$

$$\boxed{x = \frac{13}{12}}$$