

Esercizi sulle equazioni di primo grado intere

1. $x(x + 3) - x^2 - 3 = 0$ [$x = +1$]
2. $-2x + x(x - 4) = x(x + 2) - 1$ [$x = +\frac{1}{8}$]
3. $5x - x(x + 3) = x(2 - x) + 6$ [*impossibile*]
4. $x^2 - 3(x + 1) - 2[x(x + 1)] = -x(x + 1)$ [$x = -\frac{3}{4}$]
5. $2\left(\frac{1}{2}x - \frac{3}{2}\right) + \frac{1}{3}(3x - 6) + 2x^2 = x(2x - 3)$ [$x = +1$]
6. $\frac{2}{3}x^2 + \frac{1}{2}x - 3 = \frac{2}{3}x(x + 1) - 2x - 2$ [$x = +\frac{6}{11}$]
7. $\frac{1}{2}x - \frac{3}{2} + 2\left(\frac{3}{4}x^2 + \frac{1}{2}x - 1\right) = \frac{1}{2}x(3x - 1)$ [$x = +\frac{7}{4}$]
8. $(x + 1)(x - 1) + x = x^2$ [$x = +1$]
9. $3x + (x + 2)(x - 2) - x^2 = 0$ [$x = +\frac{4}{3}$]
10. $(x + 4)(x - 4) - x(x + 2) = 6$ [$x = -11$]
11. $x(x - 3) = (x - 3)^2$ [$x = +3$]
12. $(x + 1)^2 - x^2 = 2$ [$x = +\frac{1}{2}$]
13. $-2x + x(2x + 3) = 2(x + 1)^2$ [$x = -\frac{2}{3}$]
14. $-5x + (x - 3)(x + 3) - x = (x + 3)^2$ [$x = -\frac{3}{2}$]
15. $2x + 3x(x + 1) + 5 + 13x = 3(x + 3)^2 - 22$ [*indeterminata*]
16. $x(x + 4) - [(x + 2)^2 - 6x] + 6 = -2x + 5$ [$x = +\frac{3}{8}$]
17. $\frac{3}{5}\left(\frac{5}{2}x - \frac{5}{3}\right) - \left(\frac{1}{2}x + 1\right)^2 = -\frac{1}{2}\left(\frac{1}{2}x^2 + 2\right) - \frac{3}{4}$ [$x = +\frac{1}{2}$]
18. $(x - 2)(x + 2) = (x - 2)^2$ [$x = +2$]
19. $2x + (x + 2)(x - 2) = (x - 3)^2 - 1$ [$x = +\frac{3}{2}$]
20. $-(x + 4)^2 + 5 = -(x + 2)(x - 2) - 3x$ [$x = -3$]
21. $2(x - 1)(x + 3) = 2(x - 1)^2 - 4x + 5$ [$x = +\frac{13}{12}$]
22. $4(x - 2) - 7x + [(x - 2)(x + 2) - (x - 2)^2] = 0$ [$x = +16$]
23. $+2(2x^2 - 5) - \{-2[-2(x + 3)(x - 3) - 4x] + 2\} = +2x - 1$ [$x = +\frac{5}{2}$]



$$24. \left(\frac{x}{2} + 1\right)^2 - 2(x+1)(x-2) = -7x\left(\frac{1}{4}x - 2\right) + 6x \quad \left[x = +\frac{5}{17}\right]$$

$$25. \frac{1}{2}(4x-2) + (x-1)(x+1) = (x+1)^2 + \frac{3}{4}(4x-4) \quad [x = 0]$$

$$26. \left(\frac{2}{3}x + 1\right)^2 + \frac{5}{2}x = \left(\frac{1}{9}x + 1\right)(4x+1) + (x-1)(x+1) - x^2 \quad \left[x = +\frac{18}{5}\right]$$

$$27. x(x^2 + 4x + 4) - 4(x+2)^2 - x^2(x+1) = -x^2 \quad \left[x = -\frac{4}{3}\right]$$

$$28. (x+1)^3 - 9 = x^2(x+3) - 5x \quad [x = +1]$$

$$29. (x+1)(x-1) + (x+1)^2 - (x-1)^3 = +3(x^2 + 3x) - x^3 + 2x^2 \quad \left[x = +\frac{1}{10}\right]$$

$$30. \left(\frac{1}{3}x + 1\right)^3 - 1\left(\frac{1}{3}x^2 + 1\right)\left(\frac{1}{9}x - 1\right) = 1 - \frac{2}{9}x + 3(x+2) + \frac{2}{3}x^2 \quad \left[x = -\frac{45}{17}\right]$$