

Raccolta di equazioni di primo grado con frazioni. Completi di soluzione guidata.

First-Degree Equations.

Résolution des équations du premier degré.

- | | | |
|-----|--|---|
| 1. | $2x + \frac{1}{2}x = 5$ | [2]
soluzione |
| 2. | $x - 3 = \frac{1}{2}x$ | [6]
soluzione |
| 3. | $\frac{2}{3} + \frac{1}{3}x = -3$ | [-11]
soluzione |
| 4. | $3 = 5 - \frac{1}{2}x$ | [4]
soluzione |
| 5. | $x + 3 = \frac{1}{2}x + 5$ | [4]
soluzione |
| 6. | $\frac{1}{2}x - 2 = 1 - \frac{1}{2}x$ | [3]
soluzione |
| 7. | $x = 5 - \frac{3}{2}x$ | [2]
soluzione |
| 8. | $6 + x = 7 + \frac{3}{2}x$ | [-2]
soluzione |
| 9. | $7x - 3 = \frac{1}{2}$ | $\left[\frac{1}{2}\right]$
soluzione |
| 10. | $5x - 7 = \frac{1}{2}x + 1$ | $\left[\frac{16}{9}\right]$
soluzione |
| 11. | $5x - \frac{1}{2}x = -7 + 2$ | $\left[-\frac{10}{9}\right]$
soluzione |
| 12. | $4x - \frac{1}{2}x = \frac{3}{4}x + 2$ | $\left[\frac{8}{11}\right]$
soluzione |
| 13. | $8x - x = \frac{3}{2}x + 4$ | $\left[\frac{8}{11}\right]$
soluzione |
| 14. | $8x - x - 4 = \frac{3}{4}x$ | $\left[\frac{16}{25}\right]$
soluzione |
| 15. | $\frac{1}{2}x + 4 = 3x - 5$ | $\left[\frac{18}{5}\right]$
soluzione |

16. $\frac{1}{2}x - 3x = 4 - 5$ $\left[\frac{2}{5}\right]$
[soluzione](#)
17. $6x - \frac{3}{4}x = \frac{1}{2}x + 5$ $\left[\frac{20}{19}\right]$
[soluzione](#)
18. $12x - \frac{3}{2}x = x + 10$ $\left[\frac{20}{19}\right]$
[soluzione](#)
19. $\frac{1}{6}x + \frac{1}{12}x + \frac{1}{7}x + 5 + \frac{1}{2}x + 4 = x$ [84]
[soluzione](#)

Soluzioni

$$2x + \frac{1}{2}x = 5$$

$$\frac{4+1}{2}x = 5$$

$$\frac{5}{2}x = 5$$

$$x = 5 \cdot \frac{2}{5} = 2$$

$$2 \cdot 2 + \frac{1}{2} \cdot 2 = 5$$

$$4 + 1 = 5$$

$$5 = 5$$

Verificata

Oppure

$$2 \cdot 2x + 2 \cdot \frac{1}{2}x = 2 \cdot 5$$

$$4x + x = 10$$

$$5x = 10$$

$$x = \frac{10}{5} = 2$$

$$x - 3 = \frac{1}{2}x$$

$$x - \frac{1}{2}x = 3$$

$$\frac{2-1}{2}x = 3$$

$$\frac{1}{2}x = 3$$

$$x = 3 \cdot 2 = 6$$

$$6 - 3 = \frac{1}{2} \cdot 6$$

$$3 = 3$$

Verificata

Oppure

$$x - 3 = \frac{1}{2}x$$

$$2 \cdot x - 2 \cdot 3 = 2 \cdot \frac{1}{2}x$$

$$2x - 6 = x$$

$$x = 6$$

$$\frac{2}{3} + \frac{1}{3}x = -3$$

$$\frac{1}{3}x = -3 - \frac{2}{3}$$

$$\frac{1}{3}x = \frac{-9-2}{3}$$

$$x = -\frac{11}{3} \cdot 3 = -11$$

$$\frac{2}{3} + \frac{1}{3} \cdot (-11) = -3$$

$$\frac{2}{3} - \frac{11}{3} = -3$$

$$\frac{2-11}{3} = -3$$

$$-\frac{9}{3} = -3$$

Verificata

Oppure

$$\frac{2}{3} + \frac{1}{3}x = -3$$

$$3 \cdot \frac{2}{3} + 3 \cdot \frac{1}{3}x = 3 \cdot (-3)$$

$$2 + x = -9$$

$$x = -9 - 2 = -11$$

$$3 = 5 - \frac{1}{2}x$$

$$\frac{1}{2}x = 5 - 3$$

$$\frac{1}{2}x = 2$$

$$x = 2 \cdot 2 = 4$$

$$3 = 5 - \frac{1}{2} \cdot 4$$

$$3 = 5 - 2$$

$$3 = 3$$

Verificata

Oppure

$$3 = 5 - \frac{1}{2}x$$

$$2 \cdot 3 = 2 \cdot 5 - 2 \cdot \frac{1}{2}x$$

$$6 = 10 - x$$

$$x = 10 - 6 = 4$$

$$x + 3 = \frac{1}{2}x + 5$$

$$x - \frac{1}{2}x = 5 - 3$$

$$\frac{1}{2}x = 2$$

$$x = 2 \cdot 2 = 4$$

$$4 + 3 = \frac{1}{2} \cdot 4 + 5$$

$$7 = 2 + 5$$

$$7 = 7$$

Verificata

Oppure

$$x + 3 = \frac{1}{2}x + 5$$

$$2 \cdot x + 2 \cdot 3 = 2 \cdot \frac{1}{2}x + 2 \cdot 5$$

$$2x + 6 = x + 10$$

$$x = 10 - 6 = 4$$

$$\frac{1}{2}x - 2 = 1 - \frac{1}{2}x$$

$$\frac{1}{2}x + \frac{1}{2}x = 1 + 2$$

$$x = 3$$

$$\frac{1}{2} \cdot 3 - 2 = 1 - \frac{1}{2} \cdot 3$$

$$\frac{3}{2} - 2 = 1 - \frac{3}{2}$$

$$\frac{3 - 4}{2} = \frac{2 - 3}{2}$$

$$-\frac{1}{2} = -\frac{1}{2}$$

Verificata

Oppure

$$\frac{1}{2}x - 2 = 1 - \frac{1}{2}x$$

$$2 \cdot \frac{1}{2}x - 2 \cdot 2 = 2 \cdot 1 - 2 \cdot \frac{1}{2}x$$

$$x - 4 = 2 - x$$

$$2x = 2 + 4$$

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

$$x = 5 - \frac{3}{2}x$$

$$x + \frac{3}{2}x = 5$$

$$\frac{2+3}{2}x = 5$$

$$\frac{5}{2}x = 5$$

$$x = 5 \cdot \frac{2}{5} = 2$$

$$2 = 5 - \frac{3}{2} \cdot 2$$

$$2 = 2$$

Verificata

Oppure

$$x = 5 - \frac{3}{2}x$$

$$2 \cdot x = 2 \cdot 5 - 2 \cdot \frac{3}{2}x$$

$$2x = 10 - 3x$$

$$5x = 10$$

$$x = \frac{10}{5} = 2$$

$$6 + x = 7 + \frac{3}{2}x$$

$$x - \frac{3}{2}x = 7 - 6$$

$$\frac{2-3}{2}x = 1$$

$$-\frac{1}{2}x = 1$$

$$x = 1 \cdot \left(-\frac{2}{1}\right) = -2$$

$$6 + x = 7 + \frac{3}{2}x$$

$$6 + (-2) = 7 + \frac{3}{2} \cdot (-2)$$

$$6 - 2 = 7 - 3$$

$$4 = 4$$

Verificata

$$7x - 3 = \frac{1}{2}$$

$$7x = \frac{1}{2} + 3$$

$$7x = \frac{1+6}{2}$$

$$7x = \frac{7}{2}$$

$$x = \frac{7}{2} \cdot \frac{1}{7} = \frac{1}{2}$$

$$7 \cdot \left(\frac{1}{2}\right) - 3 = \frac{1}{2}$$

$$\frac{7}{2} - 3 = \frac{1}{2}$$

$$\frac{7-6}{2} = \frac{1}{2}$$

$$\frac{1}{2} = \frac{1}{2}$$

Verificata

$$5x - 7 = \frac{1}{2}x + 1$$

$$10x - 14 = x + 2$$

$$10x - x = 14 + 2$$

$$9x = 16$$

$$x = \frac{16}{9}$$

$$5x - 7 = \frac{1}{2}x + 1$$

$$5x - \frac{1}{2}x = +1 + 7$$

$$\frac{10-1}{2}x = +8$$

$$\frac{9}{2}x = 8$$

$$x = 8 \div \frac{9}{2} = 8 \cdot \frac{2}{9} = \frac{16}{9}$$

$$5x - 7 = \frac{1}{2}x + 1$$

$$5 \cdot \frac{16}{9} - 7 = \frac{1}{2} \cdot \frac{16}{9} + 1$$

$$\frac{80}{9} - 7 = \frac{8}{9} + 1$$

$$\frac{80-63}{9} = \frac{8+9}{9}$$

$$\frac{17}{9} = \frac{17}{9}$$

verificata

$$5x - \frac{1}{2}x = -7 + 2$$

$$10x - x = -14 + 4$$

$$9x = -10$$

$$x = -\frac{10}{9}$$

$$5x - \frac{1}{2}x = -7 + 2$$

$$\frac{10-1}{2}x = -5$$

$$\frac{9}{2}x = -5$$

$$x = -5 \div \frac{9}{2} = -5 \cdot \frac{2}{9} = -\frac{10}{9}$$

$$5x - \frac{1}{2}x = -7 + 2$$

$$5 \cdot \left(-\frac{10}{9}\right) - \frac{1}{2} \cdot \left(-\frac{10}{9}\right) = -5$$

$$-\frac{50}{9} + \frac{5}{9} = -5$$

$$\frac{-50+5}{9} = -5$$

$$-\frac{45}{9} = -5$$

verificata

$$4x - \frac{1}{2}x = \frac{3}{4}x + 2$$

$$16x - 2x = 3x + 8$$

$$16x - 2x - 3x = 8$$

$$11x = 8$$

$$x = \frac{8}{11}$$

$$4x - \frac{1}{2}x = \frac{3}{4}x + 2$$

$$4x - \frac{1}{2}x - \frac{3}{4}x = +2$$

$$\frac{16-2-3}{4}x = +2$$

$$\frac{11}{4}x = +2$$

$$x = 2 \div \frac{11}{4} = 2 \cdot \frac{4}{11} = \frac{8}{11}$$

$$4x - \frac{1}{2}x = \frac{3}{4}x + 2$$

$$4 \cdot \frac{8}{11} - \frac{1}{2} \cdot \frac{8}{11} = \frac{3}{4} \cdot \frac{8}{11} + 2$$

$$\frac{32}{11} - \frac{4}{11} = \frac{6}{11} + 2$$

$$\frac{32-4}{11} = \frac{6+22}{11}$$

$$\frac{28}{11} = \frac{28}{11}$$

verificata

$$8x - x = \frac{3}{2}x + 4$$

$$16x - 2x = 3x + 8$$

$$16x - 2x - 3x = 8$$

$$11x = 8$$

$$x = \frac{11}{8}$$

$$8x - x = \frac{3}{2}x + 4$$

$$8x - x - \frac{3}{2}x = 4$$

$$\frac{16 - 2 - 3}{2}x = 4$$

$$\frac{11}{2}x = 4$$

$$x = 4 \cdot \frac{2}{11} = \frac{8}{11}$$

$$8 \cdot \frac{8}{11} - \frac{8}{11} = \frac{3}{2} \cdot \frac{8}{11} + 4$$

$$\frac{64}{11} - \frac{8}{11} = \frac{12}{11} + 4$$

$$\frac{64 - 8}{11} = \frac{12 + 44}{11}$$

$$\frac{56}{11} = \frac{56}{11}$$

verificata

$$8x - x - 4 = \frac{3}{4}x$$

$$32x - 4x - 16 = 3x$$

$$28x - 3x = 16$$

$$25x = 16$$

$$x = \frac{16}{25}$$

$$8x - x - 4 = \frac{3}{4}x$$

$$8x - x - \frac{3}{4}x = 4$$

$$\frac{32 - 4 - 3}{4}x = 4$$

$$\frac{25}{4}x = 4$$

$$x = 4 \cdot \frac{4}{25} = \frac{16}{25}$$

$$8 \cdot \frac{16}{25} - \frac{16}{25} - 4 = \frac{3}{4} \cdot \frac{16}{25}$$

$$\frac{128}{25} - \frac{16}{25} - 4 = \frac{12}{25}$$

$$\frac{128 - 16 - 100}{25} = \frac{12}{25}$$

$$\frac{12}{25} = \frac{12}{25}$$

verificata

$$\frac{1}{2}x + 4 = 3x - 5$$

$$x + 8 = 6x - 10$$

$$x - 6x = -10 - 8$$

$$-5x = -18$$

$$5x = 18$$

$$x = \frac{18}{5}$$

$$\frac{1}{2} \cdot \frac{18}{5} + 4 = 3 \cdot \frac{18}{5} - 5$$

$$\frac{9}{5} + 4 = \frac{54}{5} - 5$$

$$\frac{9 + 20}{5} = \frac{54 - 25}{5}$$

$$\frac{29}{5} = \frac{29}{5}$$

verificata

$$\frac{1}{2}x - 3x = 4 - 5$$

$$x - 6x = 8 - 10$$

$$-5x = -2$$

$$5x = 2$$

$$x = \frac{2}{5}$$

$$\frac{1}{2} \cdot \frac{2}{5} - 3 \cdot \frac{2}{5} = 4 - 5$$

$$\frac{1}{5} - \frac{6}{5} = -1$$

$$-\frac{5}{5} = -1$$

$$-1 = -1$$

verificata

$$6x - \frac{3}{4}x = \frac{1}{2}x + 5$$

$$24x - 3x = 2x + 20$$

$$21x - 2x = 20$$

$$19x = 20$$

$$x = \frac{20}{19}$$

$$6\left(\frac{20}{19}\right) - \frac{3}{4}\left(\frac{20}{19}\right) = \frac{1}{2}\left(\frac{20}{19}\right) + 5$$

$$\frac{120}{19} - \frac{15}{19} = \frac{10}{19} + 5$$

$$\frac{120 - 15}{19} = \frac{10 + 95}{19}$$

$$\frac{105}{19} = \frac{105}{19}$$

verificata

$$12x - \frac{3}{2}x = x + 10$$

$$24x - 3x = 2x + 20$$

$$21x - 2x = 20$$

$$19x = 20$$

$$x = \frac{20}{19}$$

$$12\left(\frac{20}{19}\right) - \frac{3}{2}\left(\frac{20}{19}\right) = \frac{20}{19} + 10$$

$$\frac{240}{19} - \frac{30}{19} = \frac{20}{19} + 10$$

$$\frac{240 - 30}{19} = \frac{20 + 190}{19}$$

$$\frac{210}{19} = \frac{210}{19}$$

Verificata

$$\frac{1}{6}x + \frac{1}{12}x + \frac{1}{7}x + 5 + \frac{1}{2}x + 4 = x$$

$$\frac{1}{6}x \cdot 84 + \frac{1}{12}x \cdot 84 + \frac{1}{7}x \cdot 84 + 5 \cdot 84 + \frac{1}{2}x \cdot 84 + 4 \cdot 84 = x \cdot 84$$

$$14x + 7x + 12x + 420 + 42x + 336 = 84x$$

$$84x - 14x - 7x - 12x - 42x = 420 + 336$$

$$70x - 7x - 12x - 42x = 756$$

$$9x = 756$$

$$x = \frac{756}{9} = 84$$

$$\frac{1}{6}x + \frac{1}{12}x + \frac{1}{7}x + 5 + \frac{1}{2}x + 4 = x$$

$$\frac{1}{6} \cdot 84 + \frac{1}{12} \cdot 84 + \frac{1}{7} \cdot 84 + 5 + \frac{1}{2} \cdot 84 + 4 = 84$$

$$14 + 7 + 12 + 5 + 42 + 4 = 84$$

$$21 + 12 + 5 + 42 + 4 = 84$$

$$33 + 5 + 42 + 4 = 84$$

$$38 + 42 + 4 = 84$$

$$80 + 4 = 84$$

verificata

Keywords



Algebra, equazioni, equazioni di primo grado, esercizi con soluzioni



Algebra, equation, linear equations, Algebraic Equations solved, exercises with solution



Algebra, ecuación, ecuaciones de primero grado



Algèbre, équations, système d'équations, équations en première



Algebra, reactievergelijking, Gleichung

Arabic: مُعادلة

Chinese (Simplified): 反应式

Chinese (Traditional): 反應式

Czech: rovnice

Danish: regnestykke; ligning

Estonian: võrrand

Finnish: kaava

German: die Gleichung

Greek: εξίσωση (χημική αντίδραση)

Hungarian: egyenlet

Icelandic: efnajafna

Indonesian: persamaan

Japanese: 方程式

Korean: 반응식

Latvian: vienādojums

Lithuanian: formulė

Norwegian: likning

Polish: równanie, wzór

Portuguese: equação

Romanian: ecuație

Russian: формула реакции

Slovak: rovnica

Slovenian: enačba

Swedish: kemisk formel

Turkish: denklem