

Ασκήσεις στις Εξισώσεις

Να λύσετε τις εξισώσεις:

$$1. \quad 2x - 5\left(\frac{x}{3} - 1\right) = 2\left(x - \frac{1}{3}\right) + 7 \quad \left(x = -\frac{4}{5}\right)$$

$$2. \quad x + \frac{x+4}{2} = \frac{3x}{2} + 2 \quad (x \in \mathbb{R})$$

$$3. \quad 3\left(1 + \frac{2x}{3}\right) - 6\left(\frac{1}{2} - \frac{x}{9}\right) = 8 - 9\left(\frac{3}{2} - \frac{4x-3}{6}\right) \quad (x = 3)$$

$$4. \quad (x-3)(5x-4) + 4(2x-1)^2 + 10 = 2(3x-1)^2 + x(3x+1) \quad (x = 1)$$

$$5. \quad (x-4)^2 - (2+x)^2 = (x-1)^2 - (3+x)^2 + 56 \quad (x = -9)$$

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

$$7. \quad \frac{4-5x}{12} - \frac{3(x-1)}{2} = 2x - 6 \quad (x = 2)$$

$$8. \quad \frac{3x-5}{2} - \frac{4x-2}{5} = \frac{3(x-2)}{10} + \frac{x-23}{2} \quad (x = 100)$$

$$9. \quad \frac{x+3}{2} - \frac{2(6x+4)}{3} = \frac{5(3x-5)}{6} \quad \left(x = \frac{1}{2}\right)$$

$$10. \quad \frac{1}{3}\left(x - \frac{5}{2}\right) - \frac{3}{5}\left(x + \frac{4}{3}\right) = -\frac{7}{2} \quad (x = 7)$$

$$11. \quad 1 - \left(\frac{x}{2} - \frac{2x-1}{3}\right) = 2x - \frac{2}{3}\left(1 - \frac{3x-1}{2}\right) \quad \left(x = \frac{10}{17}\right)$$

$$12. \quad \frac{2\left(x - \frac{1}{2}\right)}{3} - \frac{x + \frac{1}{3}}{1 - \frac{4}{3}} = \frac{1}{2}x \quad \left(x = -\frac{4}{19}\right)$$