

Linear equations

№1. Check if the given number is a solution of an equation:

$$1. \quad x + 16 = 31, \quad x = 15 \qquad 2. \quad w - 8 = 5, \quad w = 3 \qquad 3. \quad 4a = 72, \quad a = 18.$$

№2. Solve equations:

$$1. \quad x + 7 = 19, \qquad 2. \quad a - \frac{1}{3} = \frac{5}{3}, \qquad 3. \quad -18m = -72, \qquad 4. \quad \frac{c}{9} = 36.$$

№3. Solve equations:

$$\begin{array}{ll} 1. \quad 2(x-1) - 3(x-2) + 4(x-3) = 2(x+5), & 5. \quad (6x-5)(x-2) - (3x-1)(2x-3) = 4, \\ 2. \quad \frac{a}{3} - \frac{5}{3} = \frac{a}{4} - \frac{3}{4} + 1, & 6. \quad (x+2)(x-2) - (x-3)^2 = -1, \\ 3. \quad x - (x-3) \cdot 2 = \frac{x}{2} + 7 + x, & 7. \quad \frac{4x+1}{3} - \frac{3x-1}{5} = 15 - \frac{25-x}{4}, \\ 4. \quad \frac{1+16a}{7} = \frac{5a-4}{2}, & 8. \quad (x-3)(x+4) - 2(3x-2) = (x-4)^2. \end{array}$$

№4. Solve equations:

$$1. \quad 8(x-3) + 6(2x-1) = 8(4x-2) - 2(6x+7), \qquad 2. \quad x - 4(x - 2(x+6)) = 5x + 3.$$

№5. Solve equations with a parameter:

$$\begin{array}{ll} 1. \quad ax = 3, & 4. \quad \frac{3x-1}{2} = \frac{a-x}{4}, \\ 2. \quad ax = 0, & 5. \quad a(x-1) = 2x+1, \\ 3. \quad (a+2)x - 3 = 5x + a, & 6. \quad \frac{x}{3} + \frac{a}{2} = \frac{x-1}{2}. \end{array}$$