

Irrational equations

Homework

№1. Solve the following equations:

1. $\sqrt{1+x} = 1 - \sqrt{1-x};$

2. $\sqrt{x-2} + \sqrt{1-x} = 3;$

3. $\sqrt{x+1} + \sqrt{x+2} = \sqrt{4x+5};$

4. $\sqrt{x+2} + \sqrt{x-2} = \sqrt{2x+3}.$

№2. Solve the following equations:

1. $1 + \sqrt{x+1-2\sqrt{8-x}} = \sqrt{x};$

2. $\sqrt{1+x\sqrt{2x^2+8}} = x+1.$

№3. Solve the following equations:

1. $4 + 2\sqrt{x-4} = x;$

2. $\sqrt{x\sqrt{x}-x} + \sqrt{x} = x.$

№4. Solve the following equations:

1. $x + \sqrt{x^2 - 2x + 1} = 1;$

2. $5 - \sqrt{x^2 - 10x + 25} = x;$

3. $5 - \sqrt{x^2 + 10x + 5} = \sqrt{x^2}.$