1. $21 + \sqrt{2x-7} = x$

(28)

$\sqrt{2x-7} = x - 21 \quad /^2$

$2x - 7 = x^2 - 42x + 441$

$0 = x^2 - 44x + 448$

$0 = (x-28)(x-16)$

$x_1 = 28$

~~$x_2 = 16$~~

Ll: $x = 16$

$L = 21 + \sqrt{32-7} = 21 + 5 = 26$

$P = 16$ $\quad L \neq P$

$x = 28$

$L = 21 + \sqrt{49} = 21 + 7 = 28$

$P = 28$

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

(5)

$\sqrt{x-1} = x - 3$

$x - 1 = x^2 - 6x + 9$

$0 = x^2 - 7x + 10$

$0 = (x-5)(x-2)$

$x_1 = 5$

~~$x_2 = 2$~~

Ll: $x = 5$

$L = 3 + \sqrt{5-1} = 3 + 2 = 5$

$P = 5$ $\quad L = P$

$x = 2$

$L = 3 + \sqrt{2-1} = 3 + 1 = 4$

$P = 2$ $\quad L \neq P$

3. $\sqrt{2(x-3)} = 3-x \quad /^2$ (3)

$2(x-3) = 9-6x+x^2$

$2x-6 = 9-6x+x^2$

$x^2-8x+15 = 0$

$(x-3)(x-5) = 0$

$x_1 = 3$

$x_2 = 5$

Kde: $x=3$

$L = \sqrt{2(3-3)} = 0$

$P = 3-3 = 0$

$L = P$

$x = 5$

$L = \sqrt{2(5-3)} = 2$

$P = 3-5 = -2$

$L \neq P$

4. $\sqrt{5-x^2} = x-1 \quad /^2$ (2)

$5-x^2 = x^2-2x+1$

$0 = 2x^2-2x-4$

$0 = x^2-x-2$

$0 = (x-2)(x+1)$

$x_1 = 2 \quad x_2 = -1$

Kde: $x=2$

$L = \sqrt{5-4} = 1$

$P = 2-1 = 1$

$L = P$

$x = -1$

$L = \sqrt{5-1} = 2$

$P = -1-1 = -2$

$L \neq P$

5. $\sqrt{x^2+8} = 2x+1 \quad /^2$ (1)

$x^2+8 = 4x^2+4x+1$

$0 = 3x^2+4x-7$

$D = 16+$

6. $\sqrt{37-x^2}+5=x$ (6)

$\sqrt{37-x^2} = x-5 \,/^2$

$37-x^2 = x^2-10x+25$

$0 = 2x^2-10x-12$

$0 = x^2-5x-6$

$0 = (x-6)(x+1)$

$x_1 = 6$

$x_2 = -1$

Kk: $x_1=6$

$L=\sqrt{37-36}+5=6$

$P=6$ $L=P$

$x_2=-1$

$L=\sqrt{37-1}+5=6+5=11$

$P=-1$ $L\neq P$

7. $\sqrt{2x^2+6x+1}=x+2 \,/^2$ (1)

$2x^2+6x+1=x^2+4x+4$

$x^2+2x-3=0$

$(x+3)(x-1)=0$

$x_1=-3$

$x_2=1$

Kk: $x_1=-3$

$L=\sqrt{2\cdot 9-18+1}=1$

$P=-3+2=-1$ $L\neq P$

$x_2=1$

$L=\sqrt{2+6+1}=3$

$P=1+2=3$ $L=P$

8. $\sqrt{2x+5}+\sqrt{x+2}=1$ (-2)

$\sqrt{2x+5} = 1-\sqrt{x+2} \,/^2$

$2x+5 = 1-2\sqrt{x+2}+x+2$

$x+2 = -2\sqrt{x+2} \,/^2$

$x^2+4x+4 = 4(x+2)$

$x^2+4x+4 = 4x+8$

$x^2-4=0$

$(x+2)(x-2)=0$

$x_1=2$ $x_2=-2$

Kk:

$x_1=2$

$L=\sqrt{4+5}+\sqrt{4}=3+2=5$

$P=1$

$L\neq P$

$x_2=-2$

$L=\sqrt{-4+5}+\sqrt{-2+2}=1$

$P=1$ $L=P$