Solving Radical Equations (additional practice)

Solve each of the following equations. Show all necessary work.

1. $\sqrt{x+1}+5 = x$

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

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

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

5. $2x = \sqrt{1-3x}$

6. $\frac{x}{} = \frac{\sqrt{2-3x}}{3}$

7. $\frac{1}{x} = \frac{3}{\sqrt{4x+1}}$

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

9. $\sqrt{x^2 - 8x} = 3$

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

Answers:

1. $x = 8$
2. $x = 10$
3. $x = 25$
4. $x = 4$
5. $x = \frac{1}{4}$
6. $x = \frac{1}{3}$
7. $x = \frac{2+\sqrt{13}}{9}$
8. $x = -2$
9. $x = -1\,, 9$
10. $x = 2$