Risolvi le seguenti equazioni:

1) $\frac{x}{\sqrt{2}} - \frac{x+2}{2\sqrt{5}} - \frac{\sqrt{2}x-\sqrt{5}}{\sqrt{10}} = 0$ $[x=-4-\sqrt{10}]$

2) $10x - 7 - x^2 = (x-3)(2-x) - (1-x)^2$ $[0, 3]$

3) $(2x+1)(x-4) = x^2 - 7x$ $[\pm 2]$

4) $(x-1)^3 + 2(x-3)(x-2) = x(x+1)(x+3) + 21$ $[-1]$

5) $\frac{x^2+3}{3} - \frac{(x+1)(x-1)}{4} = \frac{(x-1)(x+2)}{6} + \frac{4}{3}$ $[1; -3]$

6) $\frac{x}{x-1} + \frac{x-3}{x^2-1} = \frac{1}{x+1}$ $[-2]$

7) $\sqrt{7}x^2 + \sqrt{5}x = -\sqrt{5}(x^2+x)$ $[0;\ 5-\sqrt{35}$ o $\sqrt{5}(\sqrt{5}-\sqrt{7})]$

8) $\frac{x}{2}(x-2) - 3(x-3) + 1 = 0$ [impossibile in $\mathbb{R}$]

9) $\frac{x+2}{x^2-4x+4} + \frac{x^2}{(x-1)(x-2)} = \frac{x-2}{x-1}$ $[\frac{6}{5}$; 1 NON ACCETT. NEL C.E.$]$

10) $(\sqrt{2}+1)x^2 = x + \frac{x(\sqrt{2}+1)-1}{2\sqrt{2}+1}$ $[\sqrt{2}-1;\ \frac{2\sqrt{2}-1}{7}]$

11) $(x+1)(2x+3) + (x-1)^2 = (x+2)^2$ $[0; \frac{1}{2}]$

12) $\frac{1}{x} + 1 = \frac{4}{x+1}$ [1 radice DOPPIA]

13) $\frac{x}{2} + \frac{3(x+4)}{2x-8} = \frac{12}{x-4}$ $[-3]$

4 NON ACCETTABILE NEL C.E.